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THE Worcester Magazine

DEVOTED TO

Good Citizenship and Municipal Development.

VOL. VIII

JANUARY-DECEMBER, 1905.

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The Board of Trade, Worcester, Mass.

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The Retiring Labor Commissioner.
Board of Trade Notes.

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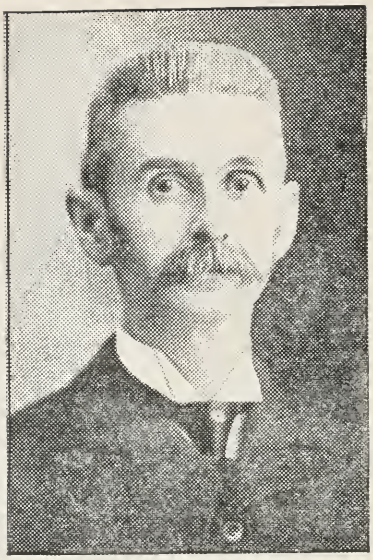
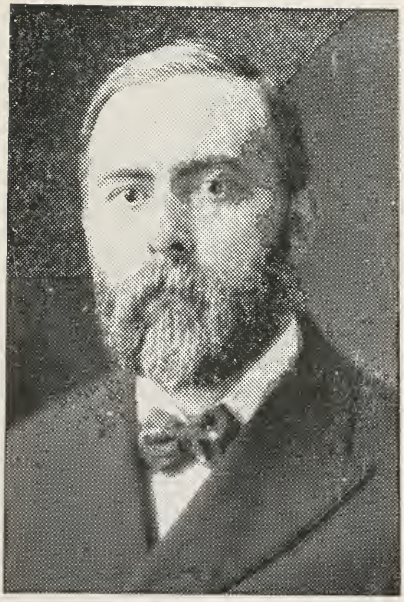


Mayor Walter H. Blodget
Elected for second term.



Dr. Alexander F. Chamberlain,
Alderman-at-large.

William F. Goldsmith,
Alderman from Ward Five.

MEN IN THE PUBLIC EYE.

The Worcester Magazine.

Vol. VIII. JANUARY, 1905. No. 1.

This magazine is published by the Worcester Board of Trade. Its reading pages are devoted solely to municipal development, good citizenship and the business welfare of Worcester. Space in these pages is not for sale.

MAGAZINE AND MUNICIPAL COMMENT.

City Election Figures

After a series of 'round-the-town rallies and whirlwind finishes, Worcester has had another municipal election. Hon. Walter H. Blodget, Repubican candidate for Mayor, was elected by a plurality of 1084 over David F. O'Connell, Democrat, as against 615 one year ago, both Mr. Blodget and Mr. O'Connell being the candidates at that time.

The theory that stormy weather affects the vote by keeping many at home was exploded, for in a heavy snow storm Worcester cast the largest vote ever polled in the city, as between Mr. Blodget and Mr. O'Connell there was a decided contest, the Democrats claiming that Worcester was ready to make a change in the office of mayor. The fact of its being Mr. Blodget's second term, the argument that the city is to be redistricted after the 1905 census, and the financial showing that was a credit to the city's executive head, were three strong arguments in favor of Mr. Blodget. There never has been in the history of the city an instance where a Republican nominee for mayor failed of a re-election for a second term.

Alderman-at-large Edwin P. Crerie was defeated by Dr. Alexander F. Chamberlain of Clark University and chairman of the Democratic City Committee. His vote was 1297 over that of Mr. Crerie, although last year Mr. Crerie defeated Dr. Chamberlain by 832 votes. This was the most decisive victory of the campaign, but is no net gain for the Democrats in the Aldermanic board, for Alderman C. H. L. Bock, Democratic candidate from Ward 5, was defeated by William F. Goldsmith, Republican, by the close majority of 78. As a result of the election the Aldermanic board stands six Republicans and three Democrats. There has been no time in the last 12 years when the no-license people made so determined an effort to swing the city into the no-license column. The Anti-saloon League, under the leadership of Rev. A. S. Gregg, commenced work on these lines nearly a year ago, and, as a finish of the outlined program, brought to Worcester Tennyson Smith of England, one of the most prominent temperance lecturers on the platform. The indications for no-license were encouraging up to the moment the polls closed, but the city's registered vote for license showed a majority of 371 in a total vote of 19,607, which was but 77 votes less than the total cast for Mayor. This shows the remarkable interest taken in the question this year. It is a fact that Worcester never has had a close vote on the license question two years in succession. In 1899 the majority was 1383; in 1900 it was 56; in 1901 it was 1420; in 1902 it was 1472; in 1903 it was 15; and this year it is 371.

The Luce law, which provided that caucuses of all parties should be held the same day, is revoked so far as Worcester is concerned. Two sets of caucuses have taken place in Worcester since it went into effect, which proved unsatisfactory to the voters and the majority to revoke this law is 5495, Worcester in common with almost every city in the Commonwealth registering its vote against it in a decisive manner. In the Common Council there are several changes, but the political make-up is about the same as last year.

Economize on Water

The present condition of the Worcester water supply is more serious than at any time since the taking of Kettle Brook, with the exception of one year of Mayor Rufus B. Dodge's administration, when pumps were set up at Coes Pond for the purpose of pumping water into the city mains. This was averted by timely rains and undoubtedly saved the city a great deal of money paid in damages. Worcester uses on an average between 9,000,000 and 10,000,000 gallons of water a day, and there is at the present time 900,000,000 gallons stored. The city can figure on about three months' supply. It is just as well to understand that the drought has been protracted to a point that furnishes good ground for apprehension in Worcester. In many portions of New England hardship and even distress are being experienced, and unless relief comes quickly these experiences will receive numerous additions.

The lack of rain extends from the Gulf to the Canadian border, and very likely beyond, and is very severe through the Ohio Valley. It is pronounced one of the worst dry spells in the history of the Weather Bureau. In the greater portion of the eastern half of the country less than ten per cent. of normal quantity of rain has fallen in the last two months, and in some places practically none at all.

Mills in many places are running on short time, with the unwelcome prospect of soon having to suspend altogether, thus throwing hundreds, and perhaps thousands, of people out of employment.

But it is not alone the manufacturing towns and cities that are suffering. The water supply for stock and for domestic purposes is low in all sections, and in many places the people are putting themselves upon an allowance, and thankful that they can still do as much as that. A similar collection of facts would disclose an equally grave situation in probably every other New England State.

For more than a year Worcester has considered adding to its water supply. The Asnebumskit Brook is the prospective supply. There is no question that with this addition Worcester would have no reason to complain for many years. What the cost would be to take on that watershed cannot be estimated. The City Council certainly has a serious proposition before it, and the suggestion of a commission to study the water problem of Worcester is a good one.

There is little likelihood that Worcester will be obliged to resort to extreme methods to obtain sufficient water supply to carry it through the dry season. Every manufacturer and user of water in large or small quantities should take it upon himself to practice economy as carefully as is consistent with his business or demands. If this is done, enough water can be saved every 24 hours to considerably extend the 90-day period which is now set as the limit with the supply on hand.

For a Bonded Warehouse

If Worcester is to maintain its port of entry it seems reasonable that the importers should take advantage of the warehousing privilege. This would increase the import duties paid in Worcester to at least $300,000 a year, double that paid at the present time. A bonded warehouse under the management of a warehouse corporation can be maintained at a comparatively small expense. There are a sufficient number of importers who could share this expense to make it exceptionally low pro rata. The benefits of a warehouse are many. Consignments in bond would be forwarded direct to Worcester and the importers would not be obliged to pay duties until the goods

were actually needed. At the present time probably two-thirds of the imports to Worcester are stored in the Boston bonded warehouse. The last five months shows that more than $100,000 has been paid in duties at the Worcester custom house. A large percentage of the goods received has been for holiday trade and had to be taken out of bond many weeks before the dealers were ready to offer them over their counters. The interest on the money necessary to be paid in duties during these few months would go a long way toward meeting the expenses of a bonded warehouse storekeeper. There has been some agitation in this direction within the past year, and it is more likely that this year will see Worcester not only one of the most prominent inland ports of entry, but maintaining a bonded warehouse.

Large Fatality List

Statistics obtainable from all sources indicate that the United States will pay this year for its steam and electric railroad service the lives of 12,155 persons, and by injuries to 136,212 more, a total of 148,367 killed and injured.

This means that a number equal to the entire population of a third-class city has been permanently or temporarily disabled in a twelvemonth. And yet the statement is made that the number of casualties given is far less than the real number.

Statistics as to the number of killed and injured by railroads are collected at regular intervals by the Interstate Commerce Commission, which in bulletin form tells of casualties on steam railroads coming under its jurisdiction; by the Census Bureau, which every ten years goes into the subject exhaustively, and by reports of State railroads to the government under which they do business.

The Interstate Commerce Commission's bulletin for the year ended June 30 last, sets forth that 3787 passengers and employees of railroads were killed and 51,343 injured. This takes into account only interstate railroads.

In Massachusetts casualties on steam and surface roads are set forth at length with regard to the ratio of killed to the number of passengers carried and the number of miles traversed, but the accidents are roughly catalogued, as "killed, passengers, 56; employees 561; trespassers, 172, and at grade crossings or stations where crossings are allowed, 52."

Only one passenger in every 198,000,000 carried on British railways in 1902 was killed, yet the official reports show that the adoption of block signals and pneumatic brakes is making very slow progress there, while here, under the compulsory law, these safeguards are presumably being installed with increasing promptitude.

Luce Law Dead

Worcester, by a majority of more than 5000, has declared its disapproval of the Luce joint caucus law and revokes it in common with a majority of Massachusetts cities who gave it a fair trial. Worcester did not like the law, the element of delay in receiving the returns figuring as an important objection. This aggravating feature of its workings, together with the objection to the publicity feature of the new law, was the reason for Worcester revoking it.

Without doubt this measure had an honorable purpose—nevertheless there are features connected with it which are open to honest criticism. Some cities and towns object to the increased expense, though that is not a sufficient reason for condemning it. The father of the law thinks that the main objections to its operation come from the party machines because it interferes with their domination. If it is responsible for such interference then the opposition from those sources is naturally to be expected.

The main virtue of the law is that it prevents the participation of Democrats in Republican caucuses and Republicans in Democratic caucuses. The object in this respect has doubtless been accomplished, and that is good so far as it goes. But there are many who entertain an honest objection to the method of securing that result. The independent element balks at the declarative

feature, and even some of the "straight-outers" do not like to have their affiliations put on record every year. In a way it violates the principle of the secret ballot and the spirit of the Australian ballot system, which is expressly intended to guard that secrecy.

Brokers' Death Blow

Judge Brown, in the United States Circuit Court of Rhode Island, has handed down a most sweeping decision for the complainant in the injunction suit brought by the Sperry & Hutchinson Company against the Mechanis Clothing Company.

The issue was whether defendant could buy the company's trading stamps from collectors and use or sell them for advertising purposes. The court holds that this cannot be done; that the only right a collector receives is to present the stamps for redemption at the Sperry & Hutchinson Company's store, and that, once issued by the merchants who have contracts with the company, the stamps, for advertising purposes, are void.

This deals a death blow to the "brokerage" business. It is said that the Sperry & Hutchinson Company will proceed to enforce this decision all over the United States against brokers who sell its stamps to merchants, to be reissued by such merchants, or who make other use of the stamps than to redeem them at the company's stores.

Back to Early Days

The Warren, Brookfield & Spencer Street Railway Co. has gone back to the early days of street railway travel so far as the fares are concerned. An order has gone forth from headquarters that after Jan. 1 the fare will be six instead of five cents between towns. The reason given is that it is necessary to make the penny advance to keep the road going. This action will create sentiment against the road in the towns where it is operated and will interfere with the fare schedule on the Boston and New York trip, the road forming an important link. A six-cent fare is suggestive of horse and other poky means of travel.

Making Slow Progress

The Worcester grade crossing proposition is making slow progress. Scheduled for daily hearings last September, these were quickly adjourned, and now a vacancy is created by the death of Henry P. Moulton of Salem. Mr. Moulton was United States District Attorney and died Dec. 5. City Solicitor Arthur P. Rugg says the death will cause further delay in the solution of the grade crossing question. It largely depends on how soon the interested parties agree on some man to take the place of Mr. Moulton. Since Worcester started on its last lap to have the grade crossings abolished, there have been many delays, disagreements, hearings to cause delay, attempts at legislative enactment to hold up the whole proposition, and Samuel Hoar and Henry P. Moulton, two of the State's able lawyers, have died in the midst of their work on the proposition.

One Acute Issue

One issue which will be vigorous and acute in the Massachusetts Legislature at the present session as between the parties is that of the Boston Police Board. For nearly 20 years the Republican policy has been along the existing line of a Police Commission appointed by the Governor of the State. Governor Douglas is expected to recommend the abolition of the system, and the substitution therefor of a single commissioner to be appointed by the Mayor of Boston. This is following the policy which has been adopted with respect to the Boston Fire Department.

Col. Russell, the head of the department, has brought about this result by his insistence on a rigid discipline combined with excellent tactfulness, and he illustrates the necessity of competency in such an office if competency in the subordinates is desired.

JAPAN'S WAR—THE FIRST SMOKE TALK.

SMOKE talks during December were of more than ordinary interest. The Board of Trade, Commercial Travelers' and Commonwealth clubs had discussed interesting questions.

The first smoke talk of the season before the Worcester Board of Trade was on Friday night, Dec. 16, by Mr. Toshi-yasu Kuma of Clark University. His subject was "Some Aspects of the Far Eastern War." Several months ago Mr. Kuma gave a talk on the war before the Worcester Club, but Friday night was the first occasion Worcester people have had to hear the Russo-Japan war discussed since decisive victories have been attained and the conditions have changed. Mr. Kuma is an interesting speaker and treats of the war condition of Japan in a most intelligent and entertaining manner.

Board Of Trade

Mr. Kuma used a large map, which showed the island empire, Corea, Port Arthur and Manchuria, sufficiently to indicate the path which has been used by the Japanese army as it pursued the Russian troops to the Sakhe River, on the road to Mukden.

It likewise showed the islands which lie between the southernmost point of Japan proper and the Chinese coast, by way of Formosa, where the Japanese lookouts will watch for the Baltic fleet if it ever comes that way.

The sending of that Baltic fleet, Mr. Kuma said, was the best piece of strategy the Russians have shown in the whole of the war. Because of it there was the tremendous attack on Port Arthur, in order to take it, if possible, and prevent the union of the Port Arthur and the Baltic fleets.

The Port Arthur fleet, being out of commission, the Japanese army can do what it could not do before, leave a sufficient force to keep Port Arthur invested and send the rest of the army to the assistance of Marshal Oyama in his troubles with Gen. Kuropatkin.

The danger of the union of the two powerful fleets was something which was a menace to Japan, for it meant the possible cutting of its communications between the home ports and Port Arthur and the other Asiatic points, where its transports had to connect with the armies in the field.

Some of the points made by Mr. Kuma were: Russia can not maintain more than 500,000 men in Manchuria, while Japan can do better than that, and if 100,000 Russians are put out of commission it takes a much longer time to replace them than it does to get men from Japan.

The financial question is the principal one with Japan, Russia having a larger credit, but every man, woman and child in Japan will sacrifice everything to maintain the standing of the country against Russia.

Manchurian roads are not adapted for the movements of the heavy Russian transportation facilities, while the Japanese lighter equipment can be handled more easily.

The statement that the Japanese army will suffer out of proportion to the Russian, at a winter camp near Mukden, is not right. The Japanese did not suffer when they went there in the Chinese war and they are better prepared than then, having had the advantage of the experience gained in the former war.

It is not likely to be the cold weather which is keeping the Japanese army so quiet, but something more important. It is likely there will be some great movement heard about in a short time.

If the coming of the Baltic fleet had not kept the Japanese army around Port Arthur until the danger of a union of the fleets was over, Kuropatkin would have had a larger army against him than he did have, and his large store of supplies at Mukden would have been taken or destroyed, so they would have been no further use to him and he would have had to retire to Harbin.

The Japanese army cannot afford anything possible in the way of defeat, and therefore the assault on Port Arthur was necessary. When the Baltic fleet enters

the far eastern waters, Port Arthur will be covered by the Japanese guns, and the Japanese main squadron is free to go south, and meet the Russians anywhere it chooses.

On all the islands past which the Baltic fleet must come, if it comes to Port Arthur, are stations, which are connected with Formosa and the home empire by cable, and at a small island near Formosa the Japanese have a fine harbor which can be used as a naval base.

The Japanese fleet can go to Hong Kong or to Singapore, if necessary, but it will likely wait until the Russian fleet leaves some coaling place on the coast, and meet it there. It is prepared to meet the Baltic fleet whichever way it comes to Japan, whether east or west of the main islands.

It is imperatively necessary to keep the Baltic fleet away from the lines of communication between Japan and the war depots, and likewise between Japan and China, for the Japanese depend on China for many of the necessaries of life, and there are some of them which would advance in price 50 per cent. in one month if the communications between Japan and Shanghai were cut.

The issue of the meeting of the fleets will depend on the relative strength of the fleet and the ability to handle it, and here Mr. Kuma expressed the feeling that the record of the war thus far indicates the Japanese can out-maneuver and out-shoot the Russians.

There was a burst of applause when Mr. Kuma said he thought "the kind of men who would fire on fishing boats don't amount to much when other men are shooting."

There will not likely be another general assault on Port Arthur, but there will be a sufficiently large army left there to invest the city while the fleet keeps the blockade strictly, and Gen. Kuropatkin will likely have an army to the east of him as well as to the south of him to attend to, and there will be some flanking movements on a large scale to drive him back to Harbin.

The Japanese control everything around Port Arthur and can plant mines which the Russians cannot pick up any more, since the destruction of their fleet in Port Arthur harbor. The speaker said it is as well to keep the Russians bottled up in Port Arthur, as they have to feed themselves there, and are not a burden on the Japanese, as they will be later when the city has fallen.

Mr. Kuma devoted some time to a description of the manner in which the Japanese prepared for their movements. He told of the storing of provisions and munitions of war, wherever there was need of it. He told of the capture of stores at the battle of the Liaoyang, when "fire was not quick enough to beat the Japanese," who took stores which Gen. Kuropatkin tried to burn when he retired.

Russia has to transport its provisions for the most part from Russia, and Japan controls the means of getting its supplies from China. The army will be better prepared to go to Harbin if the movement is delayed until spring. Japan will probably build some railroad extensions to assist in transporting munitions of war.

The fall of Harbin will mean the fall of Vladivostok, for it can then be approached from the landward side and all its supplies cut off.

Another season will likely see the Japanese taking all the towns on the eastern coast of Siberia and even as far as Kamchatka. The war will in the future be in Russian territory. The whole thing will depend on the control of the sea, and this Japan has and will keep at all hazards.

Traveling Men's Banquet

At the annual banquet of the Worcester Commercial Travelers' Association at Bay State House, Tuesday, Dec. 13, Lieutenant-Governor Curtis Guild was the guest of honor. At the speech-making following the banquet Lieutenant-Governor Guild gave one of the most interesting smoke talks that the traveling men ever listened to, and the figures given are worthy of careful consideration. He said:

"As John Hay is chiefly abused by his fellow countrymen, though conceded in foreign cabinets to be the first diplomat of his day, so Massachusetts, in spite of, perhaps because of, bitter and constant

criticism from her own children, is nevertheless still a leader among the commonwealths of this country, a mother of whose present as well as of whose past we may well be proud.

"In spite of some imperfections in legislation, in spite of the fact that Massachusetts business men have spent their money on Atchison, Topeka & Santa Fe, Flint & Pere Marquette, Union Pacific, Oregon & Transcontinental, Amalgamated, Calumet & Hecla, rather than on Troy & Boston, West Shore, or similar American transportation systems insuring direct connections with the West, Massachusetts is a good place in which to do business. Massachusetts affords the best protection of labor, Massachusetts affords a fruitful field for the honest investment of capital.

"There are but four states smaller in area than Massachusetts. Our soil is not particularly fertile. We have no particularly lavish supply of natural resources in mine or forest. The land is too thickly settled to admit of large flocks and herds. One of the oldest settled states of the Union, our percentage of progress should be naturally slower than that of states that are just beginning their history.

"Still, here are some significant business facts too often forgotten. Massachusetts, if near the very foot of the list in mere geographical area, is seventh in order of population, being exceeded only by New York, Pennsylvania, Illinois, Ohio, Missouri and Texas. Only one State, Rhode Island, is more densly settled. In the last decade nearly 600,000 were added to the population of Massachusetts, a larger actual increase than that made by any other state in the Union except alone New York, Pennsylvania, Illinois and Texas.

"The value of the products of Massachusetts manufactures in the last census year was $1,035,198,989. Measured by this scale New York, Pennsylvania and Illinois alone stand ahead of Massachusetts. In that year $228,240,442 was paid in wages to operatives in Massachusetts factories. Measured by that standard, but two states, New York and Pennsylvania, stand ahead of Massachusetts.

"Our cotton industry is threatened by the child labor and long hours of the South. If our legislators will only pass a national law prohibiting child labor, and establish uniform hours in all the states, this industry may yet be saved, for we still contain double the number of cotton spindles that exist in all the southern states put together.

"Massachusetts is nearly at the foot of the list as a producer of wool, yet she heads the list as manufacturer of wool. As worsted machinery all over the country has been superseding woolen, the condition of the former is the more worthy attention. The rate of increase in the worsted spindles of the United States in the last decade of the census was 81.6 per cent. In Massachusetts it was 110 per cent. In looms the rate of increase in the country was 38.5 per cent. In Massachusetts it was 47.7 per cent.

"Massachusetts can scarcely claim to be a producer of hides. In 1900 Massachusetts headed the list of shoemaking states, producing 44.9 per cent. of the total value of the factory boot and shoe products of the United States. New York, which ranks second, produced less than 10 per cent.

"We cannot with our forests rival Michigan or Maine as a wood pulp producer, or New York city or Chicago as a producer of rags. Yet Massachusetts leads the list as a producer of both book paper and writing paper. Over 70 per cent. of all the writing paper made in the United States is made in Massachusetts.

"We have no rubber trees except in our greenhouses, yet Massachusetts makes more rubber boots and shoes than any other commonwealth, and leads the manufacture of rubber and elastic goods of the entire world.

"Boston is the first wool market, the first boot and shoe market, the first fish market, the first market for old materials in the western hemisphere. For reasons that need not be discussed here

the suburbs of Boston refuse to follow the example of those of New York, Philadelphia, Chicago, St. Louis and Baltimore. Boston, however, as a matter of fact, though not of technicality, is the second center of population in the United States. One-thirtieth of the population of the United States, 1-20th of the wealth of the country, are within an hour's ride of Beacon Hill.

"Massachusetts was the first commonwealth in the Union to solve the rapid transit problem with a subway, the first in the world to construct a subway large, airy, lighted, and for vehicles moved by any other motive power than steam or horses, for the subway of Buda-Pesth fulfilled none of these conditions. New York's subway followed ours.

"In like fashion the Commonwealth among other things is constructing for the metropolitan district a water system. Boston received from the Commonwealth $12,768,948.80 for its waterworks.

"With this purchase and that of other waterworks and the construction of new ones, the total cost of the system is likely to be some $40,000,000. This is not, properly speaking, a State debt, as the works are to be paid for, not by the State, but by the metropolitan district, on whose entire property the debt incurred for these works is a lien.

"The annual water assessment by the State on the metropolitan district pays for operation, maintenance, interest and sinking fund requirements. At the end of 40 years these huge waterworks, with their water power already harnessed and ready to be leased at a profit, like that of Niagara Falls, with a chain of reservoirs, of which the largest is the biggest body of fresh water in the State, will stand as a highly profitable asset, not for the State, which merely loans its credit, but for the district.

"Not one town in the district has raised water rates since this system was adopted, except in the case of hand hose to check waste. In many cases water rates have been reduced."

Common wealth Club

Daniel Davenport of Bridgeport, Ct., counsel for the American Anti-boycott Association, gave a smoke talk before the Commonwealth Club, December 7th. He took for the subject of his talk the work of the association and the labor unions of to-day, viewed from the standpoint of the employer.

In beginning, Mr. Davenport gave an account of the circumstances that led to the formation of the organization. There were at that time, he said, cases of boycotting all over the United States, injury was being inflicted upon manufacturers by it, and all the machinery of the Federation of Labor was being brought to bear to prevent boycotted concerns from conducting their business.

The speaker declared that boycotting was illegal and a conspiracy both under the laws of the State and under the Sherman anti-trust act.

The organization in which he was so deeply interested was formed to prevent boycotting, by having the laws enforced, and since that time many cases have been brought all over the United States by the association.

The speaker went at length into several cases, one of the most interesting of which was the case of a hat manufacturer in Danbury, Ct., who was unwilling to unionize his shop.

That was followed by bringing all of the various local unions to bear until the business of the hatter had been severely injured, not only in New England, but as far west as the Pacific coast.

It was then that the batteries of the Anti-boycott Association were opened upon the hatters' organization. The association secured the names of 250 members of the union either owning property or having bank accounts. The property and bank books of those men were attached for $100,000. Then suit was brought in the Federal courts for $240,000, and the property of the union members again attached.

"These two cases," continued the speaker, "have been in court for more than a year. Both courts have sustained our right to bring suit and to attach property."

NEEDS OF A BONDED WAREHOUSE.

For more than four years Worcester has been a port of entry of the Treasury Department of the United States. During that time business increased to the extent that it now amounts to nearly $200,000 a year in the collection of import duties. This showing would seem to warrant a bonded warehouse, and there has been some talk among Worcester importers of having a warehousing privilege applied to this city. This would give the importer an opportunity to have his goods stored, to be taken out at his own convenience. One reason why Worcester has not had a bonded warehouse is because the importer has not found it convenient from a financial standpoint to take his goods out of bond, but has allowed them to be stored in the warehouses in Boston, New York and other cities.

On June 10, 1880, Congress passed an act which permitted merchandise arriving at certain ports therein specified to be forwarded in bond without appraisement or examination to certain other ports, provided it should appear by the invoices or bills of lading that the merchandise was destined for the second named places and the proper entry was made for the same at the original port.

These lists of ports where goods may arrive and be forwarded, and to which they may be sent, have been increased until there are now about 120 ports in the United States to which the immediate transportation privileges have been extended.

This privilege was quickly taken advantage of, and a great portion of the merchandise received at the great ports of New York, Boston, Philadelphia and other coast cities is immediately forwarded in bond to the several ports of destination.

On June 6, 1900, Worcester was, by an act of Congress, made a port of delivery in the District of Boston and Charlestown, and the privileges of the act of June 10, 1880, extended to that port.

Captain F. E. Goodwin, at that time employed in the Custom House at Boston, was appointed deputy collector in charge of the port of Worcester. He opened the office in August, 1900, and continued in charge up to the time of his death on Oct. 18, 1904.

In December, 1900, Jeremiah Murphy was appointed to assist in the work of the office, and is still there.

In January, 1903, C. F. Cook was appointed a deputy collector for the port of Worcester, and is there at the present time. Upon the death of Capt. Goodwin, Capt. C. H. Pinkham was appointed deputy collector and is now in charge of the office.

The advantages of having Worcester a port, which were readily seen by a great many of the merchants and importers, are, first, the element of cost. It does not cost so much to do the work of entering the goods as it does to employ a broker to do it. Second, and much more important, with a great portion of the merchandise, the goods are taken directly from the steamers, placed in cars, the cars sealed up and sent to Worcester, so that there can be no handling nor tampering with the goods in transit. Again, when merchandise is entered at the port of arrival, it must be opened, unpacked, examined and appraised by the officials, then repacked and shipped to its destination. This repacking and shipping is attended by a great deal of danger from breakage, etc.

One disadvantage under which the customs business is carried on in this city is the fact that the warehousing privileges have not been extended to the port of Worcester. It is principally because they have not been asked for. Under the present conditions all the merchandise which arrives must be immediately entered for consumption and the duties paid thereon. This fact sometimes works a hardship on the importers, inasmuch as they must use the money then, when perhaps they do not want to use the greater portion of the goods for several months. If there was a warehouse

here an importer could make a warehouse entry of his goods and then draw out such portions as he wanted at any time.

While it is of considerable advantage to the importers of Worcester to have the custom house as it now exists, it would be of much more use to them with the warehousing privileges. These could probably be obtained by the asking, for it would seem as though it was about time for the importers of Worcester to bestir themselves and request the Secretary of the Treasury to extend the warehousing privileges to the port of Worcester.

Anyone can maintain a bonded warehouse by furnishing sufficient bonds to the United States government, the bonds depending upon the quantity and value of goods liable to be stored there. To obtain a warehousing privilege in Worcester, the most practical way would be for importers to organize a warehousing company. This would make the expense, if divided up among the importers, comparatively small. The company, after deciding upon a warehouse and furnishing the necessary bonds to the government, could fix its own rates of storage and agree upon the necessary labor required, the company becoming the warehouse proprietors. Under the revenue laws the proprietor of a bonded warehouse is the responsible party, so that the government would look to the company rather than to the officials employed by the company. The principal official is known as the storekeeper.

During the last five months the duties collected at the Worcester custom house amounted to a little more than $100,000, which is considerably larger than were collected during the previous seven months. One reason for this is that many of the imported goods for holiday trade came in within that period. It is estimated by several Worcester importers that with a bonded warehouse the receipts would be more than doubled and would unquestionably reach $300,000 a year. It is argued that a good revenue could be derived from a warehouse, rates being fixed at so much per month, varying according to the line of goods stored.

There has been no more extensive method of advertising the city of Worcester at home and abroad as the establishment of this port of entry. The export sheet issued two years ago by the Worcester Board of Trade gave the city an extensive advertisment in foreign countries. It had more to do than any other one thing in bringing Worcester in communication with the commercial people of the world. It brought business to Worcester, and in an indirect way helped increase the revenue of this port of entry.

From an advertising standpoint it was valuable to the city.

There are many lines of goods imported to Worcester which are not needed for trade until long after their arrival in this country. The importer with the present financial and business competition cannot afford to have his money tied up in these goods for several months without placing them on the market. In nearly every instance goods of this class are left in bond in New York, Philadelphia or Boston. Of the goods coming to Worcester more than two-thirds are landed in Boston because that is the nearest port. Some goods come via New York, some via Philadelphia, and small consignments from San Francisco and Portland, Ore., but strange to say, not one bill of goods has ever come via Portland, Me., which is one of the most important of the Atlantic coast ports of entry.

As an illustration of leaving goods in bond, the liquor business is the most striking. Worcester wholesalers import from England, Scotland, France, Spain, Portugal and Germany immense quantities of wines and ales and other liquors. On these goods the duties are high. In some cases the duty is ten times the price of the commodity. On account of the high rate of duty large quantities are imported at one invoice. The dealer will not take these cases out of bond until he is ready to place them on the market, so they are left in bond in Boston or New York, or wherever importation may be. The duties are so excessive the wholesaler simply cannot afford to take them out. There is enough liquor imported in Worcester every 12

months to pay the salary of a storekeeper and other labor necessary to a bonded warehouse. During the summer many cases of toys, china and dry goods are imported by Worcester dealers. They have to be taken out of bond and stored by the dealer until a few weeks before the holidays, when they are offered for sale. If Worcester had a bonded warehouse it would be convenient to leave these goods in bond until they were actually needed for trade. A warehouse entry is made and later a permit given for removal of the goods by breaking the seal.

There are many reasons why Worcester should maintain a bonded warehouse, but these given are sufficient to show that with comparatively little expense and at a great convenience to the importer, an effort should be made to have Worcester accept the provisions of the warehousing privilege. This can be done by the formation of a warehouse company and proper application to the Secretary of the Treasury to obtain these privileges.

CHRONOLOGY OF A HOLIDAY MONTH.

A month brings many changes in the life of a city. In business and in civic life the wheel is constantly turning. Death claims many and the social side is not without its events. The holiday month, in addition to the thousands of reunions, family and society gatherings, shows an interesting list of events and changes.

Nov. 25.—Dr. Wightman Allen Drowne, formerly manager of Worcester Theater, dies in El Paso, Texas, of consumption, aged 48 years. Dr. Drowne was two seasons manager of the theater and was obliged to resign on account of poor health.

Nov. 27.—Policeman Geo. V. Barker, attached to Station 1, dies at City Hospital after a long sickness. He was born in Randolph, Me., in 1846, and was on the Worcester force 25 years.—Miss Maude M. Rich elected secretary of the Worcester Agricultural Society at annual meeting, to succeed Mr. J. E. Gifford.—Rev. J. W. Norris resigns as pastor of Memorial Congregational Church, to take effect Jan. 1.—Rev. John Addison Seibert, pastor of Adams Square Congregational Church, resigns, to take effect March 1. Mr. Seibert came to Worcester four years ago from Zanesville, O.—National Association of Armenian Libraries formed in Worcester, the first in the United States.—Charles Henry Kinney, for many years foreman in Crompton-Knowles Loom Woorks, died at his home on Maywood Street, aged 70 years. He was a native of Thompson, Ct., and had lived in Worcester 20 years. —Mrs. Ann Nason, wife of Mr. Jonathan C. French, dies in New York, the result of injuries received. She was on her way to Florida to pass the winter with her husband, when the accident took place. Burial was in Worcester. She was 82 years old, and June 22, 1903, observed her 60th wedding anniversary.

Nov. 29.—John H. Searles of Pawtucket, formerly of Clemence & Searles of Worcester, dies at Pawtucket after a short sickness. Mr. Searles was known in Worcester, having been identified with the wood-working business for a number of years, and also having been interested in the Flexible Door and Shutter Co., in the capacity of president. Mr. Searles was born in Millbury, Sept. 11, 1857, and was therefore a little over 47 years old at his death. He had lived in Worcester for upward of 12 years.—Ovide Chapdelaine, arrested on charge of murder of Mrs. Emma Brigham in Leicester; discharged at preliminary hearing Dec. 20.

Nov. 30.—Capt. Richmond Pearson Hobson visits Worcester for a day.—Mme. Katarina Tsilka, with her baby,

Elentcha, born in the Balkan brigands' camp, speaks at Plymouth Church.

Dec. 1.—John Waldo Bisco, formerly connected with the card clothing business in Leicester, dies at his Worcester home. He was born in Leicester in 1834, and his business life was devoted to the card clothing business. He continued in the employ of Bisco & Denny until 1864, when he was taken into the firm as a partner, along with his older brother, George Bisco, now of Manchester, N. H., and Charles A. Denny of Leicester. This partnership was continued until 1890, when the entire card clothing plant was sold to the American Card Clothing Co. At this time Mr. Bisco retired from business.—Twenty-ninth annual banquet of Worcester Fire Patrol, with speeches by President A. C. Munroe, Mayor W. H. Blodget, Alderman E. P. Crerie and T. H. Day, and Geo. Kendall of Hartford.—Daniel E. Denny re-elected Commander of Post 10, G. A. R. It was during his term as Commander of the Post that its membership was increased, making it the largest post in the country.—Paul B. Morgan re-elected President of Worcester County Musical Association. The finances of the association show improvement, although there is still a deficit of more than $1000.

Dec. 3.—Mayor Walter H. Blodget attends dinner at Algonquin Club in Boston, given by Governor J. L. Bates to Prince Sadanoru Fushimi, general in the Japanese army, and personal representative of the Emperor of Japan to President Roosevelt.

Dec. 4.—Patrick Conaty, father of Rt. Rev. Thomas J. Conaty, bishop of Los Angeles, Cal., and Rev. Bernard S. Conaty, rector of the Church of the Sacred Heart, dies at his home in Worcester. He was a native of Ireland, but in this country made Taunton his home. He was visiting in Worcester when stricken by paralysis in November.—Francis Marble dies at his home on Armandale Avenue. He was 69 years old and had been sick several years. He was a native of Sutton, but a resident of Worcester for many years.

Dec. 5.—Henry P. Moulton of Salem, United States District Attorney, and member of Worcester Grade Crossing Commission, drops dead in Salem.—Henry D. Perky mortgages Oread Institute property in Worcester for $50,000 to Mr. Joseph Fells of Philadelphia.—John Fairfield Chandler of Worcester, junior at Dartmouth College, dies at Hanover, N. H., from typhoid fever. He was the son of John H. Chandler, and leaves, besides his parents, two brothers and two sisters. He graduated from Classical High School in the class of 1900, and studied two years at Clark College.

Dec. 6.—John Wainwright, 50 years old, shot his wife and daughter, Mrs. Frank S. Lindley, at his home, 981 Southbridge Street. His daughter died within half an hour, but his wife is recovering. Wainwright is charged with murder.—Rev. Dr. A. Z. Conrad of New York, secretary and treasurer of the International Investment Co. of New York, and wife, given reception in Old South Church, where he was pastor from 1890 to 1901.—Samuel Taylor, 87 years old, dies at his home on Carroll Street. He was a native of Lancashire, Eng., and came to Worcester in the 40's. He was a machinist and worked at the trade 63 years. He was one of the oldest members of the Worcester Mechanics Association.

Dec. 9.—E. C. Goodwin, secretary for Senator Geo. F. Hoar, appointed acting librarian of Senate.—Captured Spanish cannon from Santiago placed on the Armory green, dedicated as a monument to the men who fell in the war of 1898. Dedicatory address made by Mayor Walter H. Blodget, followed by speeches by Commander Daniel E. Denny of Post 10, G. A. R., who presented the gun mount, and Lieut.-Col. E. R. Shumway, who accepted the monument for the Spanish war veterans.

Dec. 10.—Albert Stockdale, a native of Hennepen, Ill., dies at his home on Catharine Street.

Dec. 12.—Arthur M. Huddell of Boston elected President of the State Branch of the International Union of Stationary Engineers at Worcester semi-annual convention. — Worcester Congregational Club has 180th annual meeting and elects Mr. John S. Gould President.—Ameial Linskoski instantly killed at south works of American Steel & Wire plant by coming in contact with a live electric light wire.—Death of Joseph Towne, at home of his daughter, at 9 Forest Avenue, aged 80 years, 6 months. He lived in Worcester 55 years, being a native of Cumberland, R. I., and was connected with the Boston & Worcester Railroad, afterward the Boston & Albany, being foreman in the repair shop at the time of his death.—Capt. Joseph B. Knox, chief of police in Worcester in 1866, and veteran of the Civil War, celebrates 76th birthday. In good health, he is daily engaged in active business.—Franklin Square Theater taken under new management, Mr. M. J. Finnegan disposing of his interest to Mr. Tobias Burke of Providence. The new management is Shea & Burke, the former being Mr. P. F. Shea of Springfield, who has been the lessee of the house since it opened. Mr. John H. Murphy is succeeded as manager by Mr. John F. Burke, formerly connected with Park Theater.

Dec. 13.—Worcester & Holden Street Railway Co. operates cars for first time over its Jefferson extension.—Hon. Walter H. Blodget, Republican, re-elected Mayor of Worcester by a plurality of 1082, which is an increase over his 1903 vote, his opponent at both elections being Mr. David F. O'Connell; Dr. Alexander F. Chamberlain, Democrat, elected Alderman-at-large over E. P. Crerie, Republican, by a plurality of 1297. Alderman Crerie and Dr. Chamberlain were the candidates last year and Mr. Crerie won by a decisive majority; William F. Goldsmith, Republican, was elected Alderman from Ward 5, defeating Alderman Carl H. L. Bock. On the issue between license and no-license the majority for license was 371.

Dec. 14.—Hon. Howard K. Sanderson, postmaster of Lynn, son of Rev. Alonzo Sanderson, for many years engaged in Methodist missionary work in Worcester, dies in Lynn from typhoid fever. He was born in Williamsburg in 1865, and was for several years a letter carrier in Lynn. He was appointed postmaster in 1901 and reappointed Dec. 5 of this year. He was President of the New England Postmasters' Association. —Lewis N. Gilbert of Ware elected President of Worcester Mutual Fire insurance Co. at annual meeting in Worcester. Caleb Colvin, Geo. K. Nichols of North Grafton, and Gilbert J. Rugg elected directors for three years, they being new members of the board.

Dec. 13.—Worcester Commercial Travelers' Association observes 10th anniversary with banquet at Bay State House, with Rev. Dr. Willard Scott as toastmaster, and Lieutenant-Governor Curtis Guild, Attorney-General Herbert Parker, Mayor Walter H. Blodget, Rev. Henry B. Washburn, Hon. W. A. Lytle of Governor W. L. Douglas' Council, M. R. Jerrault, president of the Cape Cod Commercial Travelers' Association, as speakers.

Dec. 16.—Worcester County Sons of Brown University annual banquet at Worcester Club, with President Wm. H. P. Faunce and Prof. Walter Cochrane Bronson as guests of honor. Other speakers were Judge Francis A. Gaskill, Dr. D. W. Abercrombie and Joseph Jackson of Worcester.—First smoke talk of season before Worcester Board of Trade by Mr. Toshi-yasu Kuma of Clark University, on "Some Aspects of the Far Eastern War."—Adams Express Company loses goods and money amounting to $230,000 by burning of freight car on Boston & Albany railroad at Webster Junction; $4000 in bills consigned from New York to Worcester National Bank burned to crisp.

Dec. 17.—John H. Meagher succeeds M. J. Finnegan as proprietor of Park Theater. Mr. Alf T. Wilton retains the management of the house.

Dec. 18.—Russell Bowman of Westboro, one of the oldest men in New Eng-

land, dies suddenly, aged 100 years, 4 months and 27 days. He was a native of Worcester County, being born in Westboro.

Dec. 19.—John Blair elected President of Worcester Republican Club.—The car works of Osgood Bradley & Sons, on Grafton Street, damaged to extent of $25,000 and four workmen injured by explosion.—City Council approves fire department rule giving permanent members one day off in eight, over veto of Mayor W. H. Blodget; also passes order for the appointment of 10 additional permanent men after finance committee reports inexpedient to act.

Dec. 21.—Eric Knutson, president of the Swedish Publishing Co., and editor and business manager of Skandinavia, dies at his home on Orne Street from apoplexy. He was 51 years old and a native of Halmstad, Sweden.

Dec. 21.—Ex-Congressman Joseph H. Walker observes 75th birthday.—Charles Whittemore, a voter in Worcester 71 years, observes 91st birthday.

Dec. 22.—Col. Thomas Wentworth Higginson observes 81st birthday at his home in Boston.

Dec. 23.—Hon. Ledyard Bill succeeds Hon. John R. Thayer as President of Worcester Fur Co.—Elbridge Clark, contractor, native of Eliot, Me., dies on Somerset Street, aged 79 years.—Francis H. Dewey, Worcester, and Arthur F. Estabrook, Boston, elected trustees of Clark University, to fill vacancies caused by the deaths of Senator Geo. Frisbie Hoar and Philip W. Moen.

Dec. 24.—Mrs. Margaret Moynihan, 30 years old, fatally burned by the explosion of a lamp while arranging Christmas presents for her four small children at the family home, 64 Norfolk Street.—Lucy E. Sawin, 85 years old, for 60 years a resident of Worcester, dies suddenly while visiting her son in Waltham.—William C. King, formerly of Worcester, dies in Jamaica Plain, aged 83 years. He was father of Mrs. Julius Garst of Oread Street.—Rev. R. S. J. Burke, parish priest at West Springfield, native of Worcester, and founder of St. Stephen's Church in Worcester, dies in Springfield, aged 51 years.

Dec. 25.—Joseph W. Wallace, native of Nashua, N. H., shipmate of Admiral George Dewey during Civil War, dies suddenly at home of his daughter, 21 Oberlin Street, aged 74 years.—Worcester Lodge of Elks distributes 1200 parcels of clothing to needy poor.—John E. Allen, 54 years old, tailor, dies suddenly at 917 Main Street, from apoplexy.—John McNamara, 50 years a resident, and one of the original members of the A. O. H. in Worcester, dies suddenly at his home on Aetna Street.

Dec. 26.—Worcester Corps of Salvation Army provides 2275 Christmas dinners for poor families.—Mr. and Mrs. Daniel David Morgan celebrate golden wedding at Jamesville home.

Dec. 27.—Worcester National Bank officers entertain at dinner officials of other banks on account of the 100th anniversary of founding of Worcester Bank.—Robert Randall Shaw, librarian of Brockton Free Public Library, elected assistant librarian of Worcester Free Public Library.

Dec. 28.—Herbert P. Hopkins, agent for State Mutual Life Assurance Co., dies suddenly at his home on Pleasant Street, aged 46 years.

A RETIRING LABOR COMMISSIONER.

On Feb. 1 Col. Carroll D. Wright will relinquish the office of Commissioner of Labor to devote himself to his duties as President of Clark College, after a brilliantly successful administration of twenty years, during which he has come to be known as the most famous living statistician and sociologist. The policy of the Labor Bureau under Colonel Wright's direction has been the pursuit of pure fact. When outlining this policy at the beginning of his administration, Colonel Wright stated this proposition in the most emphatic terms and added that "any desire on the part of individuals or of associations of individuals, whether of labor or of capital, seeking more or less than this policy indicates must be considered as their wanting the work of the Bureau to conform to adopted theories or to be influential in shaping special ends." To this policy the Bureau has adhered without the slightest deviation, and today it commands the support and confidence alike of capital and labor.

Col. Carroll Davidson Wright was born in Dunbarton, N. H., in 1840. He is of worthy New England ancestry, being descended on the paternal side from early English colonists, and on his mother's side from the Davidsons of Scotch blood. His education was in the common schools of Washington, N. H., and in the academy at that place, in the high school at Reading, Mass., and in the academies at Alstead, Chester (Vt.), and Swanzey. He taught at Langdon when eighteen years of age, and, later on, at North Chester, Vt., was assistant principal of Mount Caesar Seminary, Swanzey. He taught in West Swanzey, and in Troy. He fitted two years in advance for college, but on account of ill health, did not enter. He commenced the study of law in 1860, while living at Swanzey, under the direction of the Messrs. Wheeler and Faulkner, of Keene. He studied with the late Erastus Worthington of Dedham, Mass., and with Tolman Willey of Boston, and was admitted to the bar at Keene in 1865, but did not engage in practice until 1867, when he was admitted to the bar of Suffolk County, Mass., and to that of the United States courts.

In the meantime the war had broken out. Young Wright promptly enlisted as a private soldier in Company C, Fourteenth New Hampshire Volunteers. In October, before the regiment left the State, he was elected and commissioned as second lieutenant of the company, and in December, 1863, he was commissioned and mustered colonel of the regiment. In the early part of 1863 he served on the brigade staff, at Poolesville, Md., as acting assistant commissary of subsistence, and in the same year he served at the Central Guard House, a military prison in Washington, and also as aide-de-camp on the staff of General Martindale, commander of the military district of Washington. In November he returned to his regiment to act as adjutant. In the spring of 1864, while the regiment was serving in Louisiana, he acted as acting assistant adjutant-general of the district of Carrollton, and later on in the same capacity in the 1st Brigade, 2d Division, 19th Corps, on the staff of Brigadier-General H. W. Birge; and he served in this capacity through the campaign in the Shenandoah under General Sheridan, being in the battles of the Opequon and Fisher's Hill. He left the service in March, 1865, resigning on account of the effects of typhomalarial fever.

It was Colonel Wright's intention to enter the practice of law at Keene, N. H., as soon as the war was over, but he was deterred by ill health until 1867, when, selecting patent law as a specialty, he went to work with such energy that within eight years he had built up a practice amounting to $10,000 per annum. In 1871 he was elected to the Massachusetts Senate, then being a resident of Reading, and represented the Sixth Middlesex District. He was re-elected in 1872, thus serving during the sessions of 1872 and 1873. He was on the committee on military affairs at both sessions, be-

ing its chairman during the second, and he was also on the committee on insurance, acting as its chairman in the session of 1873. He also served on the committee on bills in the third reading and on the committee on the judiciary. In 1873, as a result of his experience on the committee in 1872, when the great fire in Boston occurred, he carried through the bill providing for a uniform policy of insurance, known as the Massachusetts Standard Policy. He also secured the passage by the Senate of a bill which the late Josiah Quincy had fought through the House, providing for cheap morning and evening trains for workmen. As chairman of the committee on military affairs in 1873, he carried through a bill completely reorganizing the militia of the Commonwealth. This bill, for the first time in the history of the country, established the principle and practice of subjecting officers to an examination as to their character, qualifications, etc., before receiving permanent commissions.

His ability was so evident that it commended itself to the Governor of Massachusetts, who, in June, 1873, at the close of his Senatorial career, appointed him Chief of the Massachusetts Bureau of Statistics of Labor, which office he held until 1888, and during that period taking the decennial census of Massachusetts in 1875 and again in 1885. In addition, he was supervisor of the United States census for the State of Massachusetts in 1880, and subsequently a special agent of that work, to investigate and report on the factory system

The story of Colonel Wright's appointment as Commissioner of Labor is told by a warm personal friend, who has followed his career with admiration and affection. He says:

"Eighteen years ago a President—whose administration, according to the already registered decree of the electorate, was soon to be succeeded by one dominated by political principles radically different from those to which he adhered—was confronted by the perplexing necessity of choosing an officer who should organize and direct a newly-created bureau that was manifestly sure to impress profoundly and permanently the social ideals of the American people and the political policies of the United States. There was one man whose temperament and training especially equipped him for the position, and his previous public services conspicuously pointed to his pre-eminent fitness. But he was an earnest Republican; he had advocated the policies of his party on the stump, and had even been a prominent member of the national convention which had nominated the lately defeated candidate, James G. Blaine.

"Thus, although Colonel Wright—who had then served for twelve brilliantly successful years as chief of the Massachuetts Bureau of Statistics of Labor, the first bureau of the kind created in the world and the model for all that have followed—was unmistakably the man best qualified to serve as the first Federal Commissioner of Labor, it seemed scarcely proper to deprive his state of his services in order that he might hold for but two or three months a position which, by all the precedents of the spoils system, was marked as one that no President could refuse to confer upon some member of his victorious party. But those who took this view neither properly estimated the strength of Colonel Wright's achievements, nor fully realized the clear-sighted probity of the Democratic President-elect. No sooner was Mr. Cleveland aware of the nature of General Arthur's perplexities than he caused it to be made known to the latter that if the place were left open until after his inauguration he would at once appoint the Massachusetts Republican—Colonel Wright. This, however, was not the first time that confidence in the integrity and unprejudiced breadth of view of Colonel Wright had overcome the scruples of partisanship; for two Democratic governors of Massachusetts, William Gaston in 1875 and Benjamin F. Butler in 1883, had denied the ambitions of their own political followers, including men prominent as leaders of the labor movement, in order to retain his services as the head of the state bureau."

It was upon assuming the responsibilities of his office in February, 1885, that Colonel Wright enunciated the policy that has since guided the Labor Bureau and that must guide it in the future if it is to perpetuate the success already achieved. In a letter to Hon. Henry M. Teller, Secretary of the Interior, Colonel Wright said:

"I have the honor to inform you that I have entered upon the duties assigned me as Commissioner of Labor, and, at the outset, and upon the organization of such Bureau, I deem it proper to indicate clearly the policy which should mark the work of this office.

"In 1873, upon assuming charge of the Massachusetts Bureau of Statistics of Labor, I sought the advice and suggestions of many gentlemen in the country interested in labor statistics, and among other letters received was one from General Francis A. Walker, which so clearly and so fully marked the true

policy for such Bureau that I adopted it at once. And now, in taking charge of the Bureau of Labor, whose duties are for the whole nation similar to those of the State Bureau for the State, I feel that I can do no better than to adopt the policy marked out for the State in 1873 for that of the nation." Upon the basis of General Walker's letter Colonel Wright declared it to be the positive policy of the Bureau of Labor, and continuing his letter, said: "This office makes its initial work that of pure fact; and any desire on the part of individuals or associations of individuals, whether of labor or of capital, seeking more or less than this policy indicates must be considered as their wanting the work of the Bureau to conform to adopted theories or to be influenced in shaping special ends. This being the case, I trust that this policy will meet the approval of all engaged in carrying on the industrial enterprises of the country, as well as of the government which has so generously established the Bureau: and I assure you that no other policy can bring success, but that any variance from that declared will result in failure. I shall be glad in the administration of this Bureau to adopt your advice by placing the Bureau under Civil Service rules.

"The Bureau of Labor, or the Bureau of Statistics of Labor, as it is known in the United States, is an office peculiar to this country. There are now in different States of the Union thirteen such bureaus, and with a National Bureau, working in harmony with the State bureaus, I anticipate most excellent results. It should be remembered that a bureau of labor can not solve social or industrial problems, nor can it bring direct returns in a material way to the citizens of a country; but its work must be classed among educational efforts, and by judicious investigations and the fearless publication of the results thereof it may and should enable the people more clearly and more fully to comprehend many of the problems which now vex them."

Colonel Wright has resided in Washington since the autumn of 1887, and in the capital city as in Massachusetts, he has taken an interest in measures looking to the welfare of the people. He is interested in the establishment of kindergartens and in the education of the colored youth. He is President of the Manassas Industrial School for Colored Youth, at Manassas, Va. He is also President of Hackley School, at Tarrytown, N. Y. He has never been identified with any social or industrial reform, believing that the chief elements of all reform are to be found in the practical application of the principles of religion. He believes that each separate reform, so far as it follows this line, becomes a powerful contributor to all reform, but that there is no panacea for the evils of society. Thus, he believes that the collection and publication of facts showing actual conditions constitutes the most potent factor in reform movements. Friendly to all measures when properly urged, he does not find in any one an absolute solution of the problems which they are set to solve, but only aids to general evolution, which must come through increased intelligence and a knowledge of conditions that will enable men to better their lives.

Colonel Wright's active work as a statistician and student of sociological problems has extended over more than thirty years. In 1879 he was a lecturer on phases of the labor question at the Lowell Institute in Boston; in 1881 he was elected University Lecturer on the factory system at Harvard University, and again in 1900 on wages statistics. He was also University Lecturer at Johns Hopkins University in 1888 and 1890 on studies in social science; at the University of Michigan in 1891, on statistics; at the Northwestern University in 1892, on statistics; and at Dartmouth College, in 1897, on statistics. He has been Honorary Professor of Social Economics on the faculty of the Catholic University of America, at Washington, since 1895; while he has given other courses at various summer schools, especially the School of Ethics at Plymouth. He has also lectured on Christian sociology at Oberlin, on social economics at Chautauqua, at the School of Sociology at Hartford, at Brown University, and at the Meadville Theological School. He is now Professor of

Statistics and Social Economics in the School of Comparative Jurisprudence and Diplomacy of Columbian University, Washington, D. C.

In 1883 Tufts College conferred on Colonel Wright the honorary degree of A.M. In 1894 Wesleyan University conferred the degree of LL.D., while from Dartmouth, in 1897, he received the degree of Ph.D. In 1902 he received the degree of LL.D. from Clark University and in that year was chosen President of Clark College, the collegiate department of Clark University. In his official capacity he has published nearly fifty volumes of statistics, besides completing the Federal census of 1890, consisting of twenty-five quarto volumes. He is the author of many articles and pamphlets on social and economic subjects and has written two works, "The Industrial Evolution of the United States," and "Outline of Practical Sociology." He has also been named as one of the incorporators of the institute at Washington created by Mr. Carnegie.

Colonel Wright's service in connection with the arbitration of the anthracite coal strike is still fresh in the public mind. The report of the Commission, chiefly prepared by him, is nationally known as a model of logical analysis, and the principles laid down therein have already proven of great advantage to the industries of the country. In speaking of his philosophy and teachings, a life-time friend condenses much in little space. He says:

"Colonel Wright speaks so clearly and so freely that there need be little difficulty in comprehending the direct and simple tenets of his social philosophy. It is one of balanced optimism springing from a reasoned and deeply-rooted trust in the essential beneficence of the all-pervading and unceasing divine purpose which he perceives, written largely in the history of all ages and all society. He places religion ahead of all other social influences, while asserting that it must progress as men progress, and be refined and spiritualized as the ideals of humanity become more elevated and spiritual. He proclaims, as next in importance, the gospel of individual effort; the doctrine that personal improvement sought and obtained by means consistent with ethical principles must lead to general advancement. His broad electicism finds philosophical socialism fraught with an important message to mankind; but he regards it as most valuable as a criticism which points out the blemishes in the present system. The latter is to be developed and improved, but it is a result of divinely appointed evolution, and cannot be superseded by any man-made formula. There is no universal remedy, no panacea for social ills; but there is, and must always be, a trend toward improved conditions."

WORCESTER BOARD OF TRADE.

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The Worcester Board of Trade, in connection with the Springfield Board of Trade, has taken up the matter of delayed mail service between New York and Boston on the train leaving New York at 11 p.m., and due in Boston at 6.15 a.m. This service, while it does not affect Worcester as badly as Springfield, is an inconvenience to many business houses. It means the delay of delivery of the early morning business mail in Boston, if the train is late, and figures show that in November it was late from five to sixty-five minutes twenty days out of the thirty. Worcester has service between this city and New York via Springfield, Providence, Boston and Putnam, Conn., but the service via Springfield has been the same for the past thirteen years, no improvement being made. The most unfortunate city in relation to this delayed mail service is Springfield, and the Board of Trade of that city has started the agitation all along the line. If the New York train is six minutes late into Springfield, the train from Albany goes on to Boston without the New York mail car, and if ten minutes late, the mail to points north of Springfield is delayed.

Another matter in connection with the improvement of the mail service that has demanded attention, is in relation to the train leaving New York and Boston at noon. The New York train reaches Worcester at 4.30 in the afternoon. If a mail car was attached to this train the business mail could be distributed in Worcester in the afternoon so that replies could be sent back the same day.

At the hearing December 21st, before the officials of the New York, New Haven & Hartford Railroad, in Springfield, in relation to the delay of the early morning mail due in Boston at 6.15, Worcester was represented by the Springfield Board of Trade. In relation to having the mail car attached to the train leaving New York at noon and due in Worcester at 4.30 in the afternoon, it will be necessary to petition the Postmaster-general for this better service.

Vice-president Todd of the New York, New Haven & Hartford Railroad said at the hearing that the night train to Boston now leaves New York at 11.02 o'clock, or two minutes behind an all-mail train that runs to Boston by the Shore Line. He proposes to start the train via Springfield ahead of the Shore Line train. As the Springfield train is now very heavy, consisting of an average of eleven cars and sometimes as many as fourteen, he proposes to take off two express cars which run to Hartford and one which runs to Springfield, and run these three cars on the train leaving New York at 8 o'clock in the evening. These changes, he believes, will enable the night train to make its scheduled time under ordinary conditions. It was also represented by the officials of the New York, New Haven & Hartford Railroad, that a mail car will be attached to the noon trains running from Boston and New York. The train leaving New York reaches Worcester at 4.30. With this arrangement, Worcester will be able to have a late afternoon business delivery of New York mail, which will be important to busines men. They can receive their mail in time

to answer it and have it reach New York early in the morning.

At the Springfield conference the officials of the New York, New Haven & Hartford Railroad were represented by First Vice-president P. R. Todd, General Superintendent O. M. Shepard, Superintendent G. H. Wilson of the Hartford Division of the Consolidated Road, and several representatives of the Springfield Board of Trade. The road officials admitted that the morning mail service was poor. The road was defended, however, as to its service in general. It was pointed out that 1858 trains a day were run on the system, and that during the last five months 87.2 per cent. had been on time. The railroad officials realize, however, that something must be done about the night mail service and promised radical changes at once.

The Worcester Merchants' Association was particularly active during December. Two meetings were held at which the trading stamp tax and the fifty-eight-hour law were discussed in detail, and important action taken. The trading stamp law which went into effect December 1st, provides that every person, firm or corporation selling, giving or delivering trading stamps, checks, coupons or similar devices in connection with the use of articles entitling holders to receive articles other than those so sold, shall pay an excise tax equivalent to three per cent. of the gross receipts by said person, firm or corporation, from the sale of these articles. Aside from the green, red, blue, pink and other so-called trading stamps, there are many coupons given with cereals, soaps, tobacco and other articles of merchandise.

The Merchants' Association has made the trading stamp proposition one of its principal issues, and at the December meeting it was unanimously voted that the Worcester Merchants' Association recommended the discontinuance of the purchase or sale of all articles containing trading stamps, checks, coupons or similar devices, rendering merchants subject to taxation provided for by the laws of the Commonwealth.

The Retail Grocers' Association has refused to handle many of the cereals which contain these coupons. These include cereals for which there is a large demand, but the grocers absolutely refuse to pay the tax. If the cereal is made in Massachusetts, and wholesaled in Massachusetts, it means a tax of nine per cent., the manufacturer, jobber and retailer having to pay this tax for handling the goods. Manufacturers of cereals refused to remove the coupon, claiming the law was unconstitutional. In several cases, cases of cereals shipped to Worcester were allowed to remain in the freight houses indefinitely, the storage bill accumulating sufficient to wipe out all profits from the sale of the goods.

It was not until manufacturers of these articles sent representatives to Worcester to open the packages, remove the coupons and settle the demurrage charges, that the retailer would accept the goods.

It is stated that upwards of $225,000 was taken out of Worcester every year by trading stamp men, which means that the consumer had to pay just that much more for his goods. It is now said that trading stamp companies operating in Massachusetts, joined by manufacturers using stamps, coupons and tickets in pushing their goods, are preparing to make a fight against the anti-trading stamp law. Prosecutions will be invited for the sole purpose of making a test case, at the hearing of which the constitutionality of the legislative enactment will be attacked, while at the coming session of the Legislature a movement will be started with a view to having the entire section or parts of the first paragraph eliminated in such a way that the law will be harmless. Of Worcester merchants who formerly handled trading stamps, 432 signed an agreement to do away with them, this being after the organization of Worcester Merchants' Association.

Another matter which the Association acted upon was the fifty-eight-hour law, which provides that no child under eighteen years of age and no woman shall be employed in a commercial establishment more than fifty-eight hours in a week. Mr. Charles A. Dam, of the State Police Factory Inspection Department, appeared before the Association and told in detail the workings of the law. During Christmas week the retail stores are open more than fifty-eight hours. This necessitated the complete reorganization of the hours of labor in order to comply with the law. Stores were not opened until 8.30 in the morning.

In many of the larger stores the arrangement of the hours of clerks was such that many of them did not get in until 10 o'clock in the morning, the clerks coming in early in the morning having time off during the day. The hours of opening and closing were fixed by the Merchants' Association, and it is probable an effort will be made to have some change made in the law so far as it refers to Christmas week.

THE WORCESTER MAGAZINE

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Magazine and Municipal Comment.
Henry Cort.
Value of an Engineering Education.
Fenway for Beaver Brook.
Street Railway Development.
Board of Trade Notes.

DEVOTED TO

Good Citizenship and Municipal Development

PUBLISHED MONTHLY BY THE BOARD OF TRADE
WORCESTER, MASSACHUSETTS,
U. S. A.

$1.00 A YEAR. 10 CENTS A COPY.

IN MEMORY OF
HENRY CORT
BORN AT LANCASTER 1740
INTERRED AT HAMPSTEAD 1800
TO WHOM THE WORLD IS INDEBTED
FOR THE ARTS OF REFINING IRON
BY PUDDLING WITH MINERAL
COAL AND OF ROLLING METALS
IN GROOVED ROLLS.

HENRY CORT.

The Worcester Magazine.

Vol. VIII. FEBRUARY, 1905. No. 2.

This magazine is published by the Worcester Board of Trade. Its reading pages are devoted solely to municipal development, good citizenship and the business welfare of Worcester. Space in these pages is not for sale.

MAGAZINE AND MUNICIPAL COMMENT.

Railroads are Agreed

The three railroads interested in the abolition of grade crossings in Worcester have agreed upon the location for a new union station. This area is bounded by Washington Square, the Boston & Albany division tracks, the viaduct on the west, and Front Street on the north as being, all things considered, the best and practical location for a new union station. This location was figured out and advocated by Mr. Thomas J. Sawyer in an article in the July number of Worcester Magazine, the article being accompanied by a drawing showing the detail of his plan.

It appears that the three interested railroads, Boston & Albany, New York, New Haven & Hartford, and Boston & Maine, have agreed upon the location and plans, the latter being by Watson & Huckel, architects of Philadelphia. These plans are in no way similar to those presented last year by the New York, New Haven & Hartford Railroad when it suddenly advocated the change of location of depot site. At that time the Boston & Albany Railroad emphatically opposed the new location.

The present plans call for an imposing structure, of light brick, with terra cotta trimmings, and facing the present passenger station, just across the square. The station building will set back from 90 to 100 feet from Washington Square, and will have a total frontage on the square of nearly 800 feet.

The broad space in front of the station will have in its centre a fountain. The rest of the space will afford ample room for a drive for carriages and for the street car lines, in case they should care to curve their present tracks around and into the area in front of the station.

The main floor of the station will be upon a level with the street, although the car tracks, according to the present plans of the grade crossing commission, will be twelve feet above the level of the main floor. Elevated and covered platforms, leading to which are stairways from the ground floor, will be used, both in boarding or in alighting from trains. The Boston & Albany tracks will be on the south side of the station, while the iron of the Boston & Maine and the New York, New Haven & Hartford roads will form the west platform boundary.

With the railroads agreed upon location and plans, there is no reason why work on the abolition of Worcester's grade crossings is not assured at no distant date.

To Rebuild the Old Cradle

The proposition to rebuild the Merrifield property on Exchange, Union and Cypress Streets is the most practical that has been advanced for many years. It means the further development of Worcester manufactories, and sure growth of the city. There is now and has been a lack of space for small manufacturing concerns, and the need of an industrial

building has been known by every person who has to do with making machinery. The plans for rebuilding or remodeling this cradle of Worcester industries are said to have gone so far that the accomplishment is certain. It is probable work will begin early this season to rebuild the east side of Union Street. The entire plan means the expenditure of a million and a quarter dollars, which will give half a million feet of floor space. Of the great industries which have made Worcester the largest manufacturing city in the United States, a majority of the founders learned their trade and received their first business start in the Merrifield buildings. The promoters of this newest proposition have provided for the future growth of this city in a way which has been needed for a long time.

Points of Second Inaugural

In his second inaugural address Mayor Walter H. Blodget made several important recommendations. The keynote of his theme, as is noticed in that of every other mayor, is financial economy. A few years ago such a recommendation stood for something, but today, unfortunately, city councils pay little attention to such recommendations. It is easy to spend money belonging to some one else, and city councils do not lose sight of this fact. Mayor Blodget sees the possibility of a $16 per $1000 tax rate, and has an ambition to bring that about. While economy is a feature of his inaugural, he recommends improvements. The most important are:

Commission to consider the further development of Worcester's water supply.

Term of three years for license commissioners, one member to be appointed annually.

New police station to replace the Waldo Street structure.

New engine house to replace the building on School Street.

New building for Public Buildings Department.

Careful expenditure of city's funds to give Worcester a permanent tax rate of $16 per thousand.

Better facilities for care of students that attend Classical high school.

That "those interested in the management of the Public School Department, as well as those interested in management of all other departments," should keep in mind the necessity of economy.

To raise the Holden dam five feet, thereby increasing the storage capacity of the Holden reservoirs.

The paving of Main Street from Wellington Street south, of Southbridge Street from Main to Madison Streets, of Lincoln Street, and of Park Street, with granite blocks.

A loan for the beginning of the proposed widening of Shrewsbury Street.

Settlement of the Quinsigamond Park question.

Taking the Census

The Government Census Bureau is taking the census of the manufacturing business of the United States. Work began Jan. 16, when 2500 persons went to work on the task. In Massachusetts it is being directed from the Massachusetts labor headquarters.

The Bureau hopes to have the statistics in hand by the middle of March. Their compilation and the drawing of deductions from them will occupy a large force of skilled workers during the entire year. Possibly a preliminary report will be ready by May 1. The plans for taking this special census were carefully matured during the latter part of 1904, and the opening of the new year found the Bureau fully prepared to carry them out. Heretofore, manufacturing censuses have been taken in conjunction with the ten-year count of population, and naturally they failed to receive that special attention which such a study demands.

The Bureau, of course, pledges its good faith that the individual manufacturing establishment shall be protected; only totals are to be public. It is guaranteed, for example, that if there should be only two manufacturing establishments in the United States making the same article, the returns made by them would not be published, because each would then know the other's figures. This guarantee that the business of the individual will be protected from publicity, the Bureau believes, will induce

manufacturers willingly to supply the information desired. The schedules go into great details, and the full report ought to throw much light on the business of the country.

Orders for 1905

The Iron Age has collected expression of opinion from New England manufacturers regarding the business outlook for 1905. The result is decidedly encouraging, the states being summed up as follows:

Massachusetts.—Our forecast for 1905 appears so brilliant that it dazzles us. We believe that unless something unforeseen happens the next year will be the biggest in the tool trade that has ever been known in this country. Even now, in the month of December, our sales are exceeding our production, and this does not include orders which we have on hand for future delivery, and which are greater in volume and number than ever before. We believe the stocks in the hands of the merchants are very low, and while it has never been customary for dealers to speculate in our line, they are in the habit in ordinary years of ordering what they actually require. In the event of their doing this in the year just ahead of us, it must of necessity be a very large one.

Rhode Island.—All present indications seem to point to a good volume of business during the coming year, and in our own case we are hoping to turn out a larger tonnage than in 1904, which has realized very satisfactory results. There has rarely been a time when the disturbing factors in the problem were so few and of so little weight, thus giving rise to a feeling that good business, good prices, and good times are a foregone conclusion for the year to come. We trust that nothing will occur to prevent the realization of these most promising omens, and that when the business records of 1905 are complete it will prove to be the banner year in the business history of our country in every way.

Connecticut.—We believe the outlook for trade in our various lines of manufacture is better for the coming year than it has been for several years, although in one of our lines large buyers have placed orders extending practically through the season of 1905, and in some instances at prices below what the goods could be made for. Such a condition we feel is injurious to orders in the near future. We notice a disposition on the part of large buyers to now place orders covering as nearly as possible their wants for 1905. This we are discouraging as much as possible.

Great Strike Settled

The Fall River strike is settled. Gov. W. L. Douglas, after several conferences, brought about an agreement between the mill men and operatives, arbitration being agreed to. The terms of settlement are: (1) operatives to call off the strike; (2) arbitrator to fix wage scale, on proper investigation; (3) each mill to settle its loom schedule.

Personal influence of Governor Douglas had considerable to do with the settlement, in much the same way Governor Crane did with the railroad men and the freight handlers. There is general feeling of satisfaction at the result. This strike is one of the most expensive to mill owners and operatives than any that has ever occurred. The following brief history of the strike is interesting:

Strike began July 25, 1904; greatest disturbance ever known to United States textile industry; 25,000 operatives thrown out of work; 71 mills, controlled by 33 corporations, shut down; most of machinery idle until November; cause, 12½ per cent. reduction in wages; capital of mills affected, $25,000,000; number of spindles, 2,300,000; weekly loss to operatives, $150,000; weekly loss to mills, $23,000; aggregate loss, $5,000,000; no disorder or lawlessness prevailed; Bishop Lawrence commended strikers for their good conduct; thousands of people have left Fall River; intense suffering among strikers; Fall River unions contribute $200,000; outside contributions amounted to $50,000; last big strike in Lowell, 1902, for 12 weeks; 17,000 hands affected.

New Bank For Worcester

Worcester is to have a new banking institution to be called the Merchants National Bank. A ten-years' lease of the rooms in the People's Savings Bank building, 452 Main Street, formerly occupied by the Central National Bank, has been taken by Drury & Bonney for the new financial institution. The bank was organized Friday, Jan. 13, with the following as directors:

George A. Draper of Hopedale, president of the Draper Machine Works, Hopedale.

Dr. Homer Gage, director of the State Mutual Life Assurance Company.

Judge William T. Forbes, judge of probate, Worcester.

Charles L. Allen, secretary and general manager of the Norton Emery Wheel Company, Worcester.

Harry T. Whitin of Whitinsville, president of the Paul Whitin Manufacturing Company of Northbridge.

John A. Hall of Southbridge, treasurer of the Southbridge Savings Bank.

Chandler Bullock, director of the State Mutual Life Assurance Company.

George C. Whitney, president of the George C. Whitney Company.

Richard C. Cleveland, president and treasurer of the Smith-Green Company.

Henry E. Whitcomb, manager of the Whitcomb Envelope Company division.

Frank A. Drury of the firm of Drury & Bonney.

Richard Healy, retail merchant at 512 Main Street.

Oliver B. Wood of the Commonwealth Press on Foster Street.

The charter of the bank calls for a capital of $500,000, and a surplus of $250,000. Mr. Downie D. Muir of Baltimore, United States bank examiner for the Maryland district, has been offered and accepted the presidency of the new bank. Others connected with the bank are: Cashier, Alonzo G. Davis, Quinsigamond National Bank; Teller, Charles S. Putnam, Worcester Trust Co.; Bookkeeper, Charles W. Cheney, Worcester Trust Co.; Messenger, Edward J. Jenkins, Lincoln Square Branch Worcester Trust Co. Mr. Davis, the new cashier, has been eighteen years with the Quinsigamond Bank, his position at the time of retirement being assistant cashier.

A Disastrous Combination

Springfield lost its municipal building by fire last month, and there was a monkey in the case. An inflammable booth, restless monkey and kerosene lamp constitute a rather formidable combination, but it turned out to be a rather serious one for the city on the Connecticut. The building was not valued above $50,000, and the city long ago outgrew it. It was used for charity parties, public meetings and food fairs, that being its use at the time of its destruction.

It is not customary to insure public buildings, the theory being that the principle of insurance is carried out in any event from the fact that the loss falls not upon the few, but on the many, which is the basic idea in all insurance. Doubtless, the men and women of to-day regret the loss of a conspicuous and familiar landmark, but the next generation may be glad that it burned. It stood facing Court Square, the city's most cherished open space, and the focal point of all those schemes of municipal improvement and adornment toward which the citizens have been working. It was involved in all the proposed transformations. Conditions are likely to undergo radical change in fifty years, and it is easily possible that the results of this movement will be much more harmonious and satisfactory than though the old building had remained in the nature of a problem.

Medallion of Henry Cort

The Worcester Magazine is glad to be enabled to publish as its frontispiece in the present number a photograph of a plaster model for a medallion in memory of Henry Cort, who died in England in 1800.

This model was designed and executed by Mr. Arthur E. Howard of the Woodbury-Carlton Company of this city, from an engraving of Henry Cort, and its artistic and lifelike modeling is no less worthy of admiration than the remarkable achievements of its subject.

The pathetic story of Henry Cort's inventions and Henry Cort's reward is the subject of an article in the present number of the Magazine.

HENRY CORT.

BEFORE 1784 all the wrought iron used in the English Navy, and a large proportion of all wrought iron used in England, was imported from Russia and Sweden. The value of such importation amounted annually to nearly £1,500,000, and as the demand for wrought iron rose the difficulty of importing it increased until, in 1775, owing to the action of Russia and Sweden, and the wars in which England was engaged, the price had tripled. The refining of iron in England was handicapped owing to the laws forbidding the manufacture of charcoal for that purpose. These laws were passed to protect the forests, and since no method was known of refining iron without the use of charcoal, the production of wrought iron in England was very limited. For nearly a century and a half iron manufacturers in England had been struggling with the problem of refining iron with mineral or pit coal, and at the conclusion of their labors it was still unsolved. Good wrought iron apparently could not be produced without charcoal, at least no means had been found of so producing it upon a commercial basis. After the iron had been refined it was worked by repeated heatings in the furnace and hammerings to improve its tenacity and to shape it into bars. Charcoal was used in England only in the refining process and the subsequent heating was by the use of coke. This process was extremely slow and the iron produced, owing to the poorer English ore and the use of coke, was so inferior to the imported iron that the Navy refused to purchase English iron. The stamping process in addition entailed a loss of about 50 per cent. of the original unrefined iron.

At this period Henry Cort was engaged in London in the business of buying supplies for the English Navy, in the process of which he had accumulated about £20,000. Of course, in his business as navy broker, he was familiar with the unfortunate dependence of England upon foreign countries for wrought iron, and in 1777 he retired with his £20,000 to Fontley, near Portsmouth, and invested his money in the construction of an iron mill. From 1777 to 1783 he worked and experimented in the refinement of iron with mineral coal, and in 1783 and 1784 two patents were issued to him: the first for the process of refining iron with mineral coal by puddling, or admitting air to the unrefined iron by stirring it while in the process of melting to increase the oxidization, and the second for passing wrought iron while in a plastic state through grooved rolls, and, as the shape of the groove could be varied, any desired form could be imparted to the finished product. The quality of the wrought iron so obtained was excellent, and the puddling process ended the dependence of England upon foreign iron, since it at once obviated the necessity of charcoal in refining the iron.

But not only did Henry Cort revolutionize the production of wrought iron, but by his second patent for grooved rolls the slow and laborious forging under the hammer in working the iron was discarded; the iron industry in England was set upon firm foundations, and in a few years reached an undisputed pre-eminence. A single example will suffice: in 1787, four years after the grooved roll patent was issued, Richard Crawshay, an iron manufacturer of Wales, was struggling to produce ten tons of bar iron a week, and in 1812 he was making over 200 tons in the same time. As he testified before the House of Commons in that year, "I took the process from a Mr. Cort, who had a little mill at Fontley." And in the United States alone in 1899, 167,000 tons per week of iron and steel were produced, every pound of which passed through grooved rolls like those first used in the "little mill at Fontley." The enormous development in the manufacture of iron and steel, and the things that depend upon them, would have been impossible without grooved rolls; the construction of railroads could not have been accomplished, and the manufacture of wire,

which has supplied Worcester with its largest industry, could never have arisen. This invention of Henry Cort's can be compared only to the invention of the steam engine, in considering its influence upon the destinies of mankind.

In a few years after Cort's invention the English Navy, which had refused to use iron wrought after the former English method, discontinued the use of foreign iron, and Henry Cort lived to see the requirement by the Navy Board that only Cort's iron should be used. The value of wrought iron made after Cort's process was immediately recognized, and he soon had contracts with most of the English iron manufacturers to use his method and pay him a royalty of ten shillings per ton, which, in a few years, amounted to £25,000 per year. Before, however, he had reached the goal of his efforts and had completed his inventions, his £20,000 was exhausted, and he was obliged to borrow about as much more from one Adam Jellicoe, then a paymaster in the Navy, and to assign his inventions as collateral.

In 1789 Henry Cort saw his reward in sight; his years of toil were not in vain; the importance of his inventions was recognized by all, and the man who, by his foresight, his skill and patience, had finally harnessed the most important, if not the most precious, of the metals for the service of man, was about to enter into his harvest. But the very greatness of his inventions was the cause of his ruin, and certain of the iron manufacturers of England, now clearly seeing the wealth which Henry Cort had created, were only seeking an opportunity to deprive him of his rights in it. Nor was the opportunity lacking; the money which Adam Jellicoe had advanced had been stolen from the government, and his death in 1789 made public the defalcation which had been known to his superiors, and was apparently a surprise to no one but Henry Cort. A certain Lord Melville, at that time Treasurer of the Navy, was also concerned in the defalcations, and it was with him that the leading iron manufacturers conspired to deprive Henry Cort of his so valuable inventions.

Haste was necessary, and an extent or summary execution to recover debts due the crown was issued upon the perjured testimony of a deputy of Lord Melville to the effect that Henry Cort was in "embarrassed circumstances," and that his property must be seized at once. Yet at that very time Henry Cort had a contract with the Navy for £15,000 worth of iron, and had contracts for £25,000 per year as royalties, and the assets of the firm at Fontley amounted to at least £40,000. But Henry Cort was condemned unheard, and the extent issued under which all his property at Fontley, his patents and contracts were seized. Lord Melville, who was aware of Jellicoe's defalcation, had already procured an assignment of the Cort patents from Jellicoe, ostensibly as security.

And now appears the hand of the iron manufacturers, for after the seizure in 1789 the patents and contracts entirely disappeared, and were probably burned by Lord Melville in the general conflagration, which he made of all his treasury papers just before his trial fourteen years later. No royalty was ever paid to any one after 1789 for the use of these inventions, and Henry Cort and his children died in poverty. In fact the ruin and robbery of Henry Cort was so cunningly contrived and secretly executed that the full particulars were not discovered until 1859, sixty years later.

Henry Cort, ignorant of the authors of his losses, spent the remainder of his life in fruitless attempts to induce the Navy Board, headed by Lord Melville, to restore his patents, the royalties upon which in one year would have paid his debt. What arrangements were made between Lord Melville and the iron manufacturers can never be known, but at Cort's death in 1800 the accrued royalties under the contracts amounted to over £200,000, and none of this was ever collected. Neither Henry Cort nor his family ever received a penny for the universal use of his inventions, but a pension of £150 per year, granted in 1794, on the petition of "some of those interested in the iron industry of Great Britain," was Henry Cort's reward.

H. W. F.

THE MONEY VALUE OF AN ENGINEERING EDUCATION.

THE subject of the value of a higher education is one which has always been debated ever since the existence was first admitted of any such thing as a higher education. The arguments pro and con are too familiar to need repetition here; and for present purposes it is only necessary to note that the debate has of late been more earnest, and in some cases even more acrimonious, than ever before. With the growth of manufacturing there has been a multiplication of opportunities for young men to begin practical work at an early age; and the temptation to become an active producer at the earliest possible moment has proved to be strong enough to induce many young men to leave school at a comparatively early age.

Of the mental and the social advantages of this question it is not necessary to speak. The only thing desired in this article is to bring into comparison the earning capacity of the young man who has obtained an engineering education, and the young man who has begun practical work at an earlier age. Or, to put this in the form of a question, "From a financial point of view does a technical education pay?"

The recent report of the United States Bureau of Education, after an exhaustive investigation of the subject, presents figures which show that in this country a boy with a common school education has practically one chance in 9000 of general recognition as a successful man in some department of human endeavor and usefulness.

A boy who has devoted four additional years to his education, that is to say, a boy who has graduated from the high school, has practically one chance in 410 of obtaining similar recognition.

If to the high school equipment be added the training given by the college or the technical school, the young man has one chance in forty-five of achieving what may fairly be called a success which entiles him to general recognition.

To put these facts in another way, a high school education increases a boy's chance of success by about 22 times, while the college education increases this result about 10 times more. This indicates that the chance of success possessed by the college graduate is about 200 times that of the boy who possesses only a common school education.

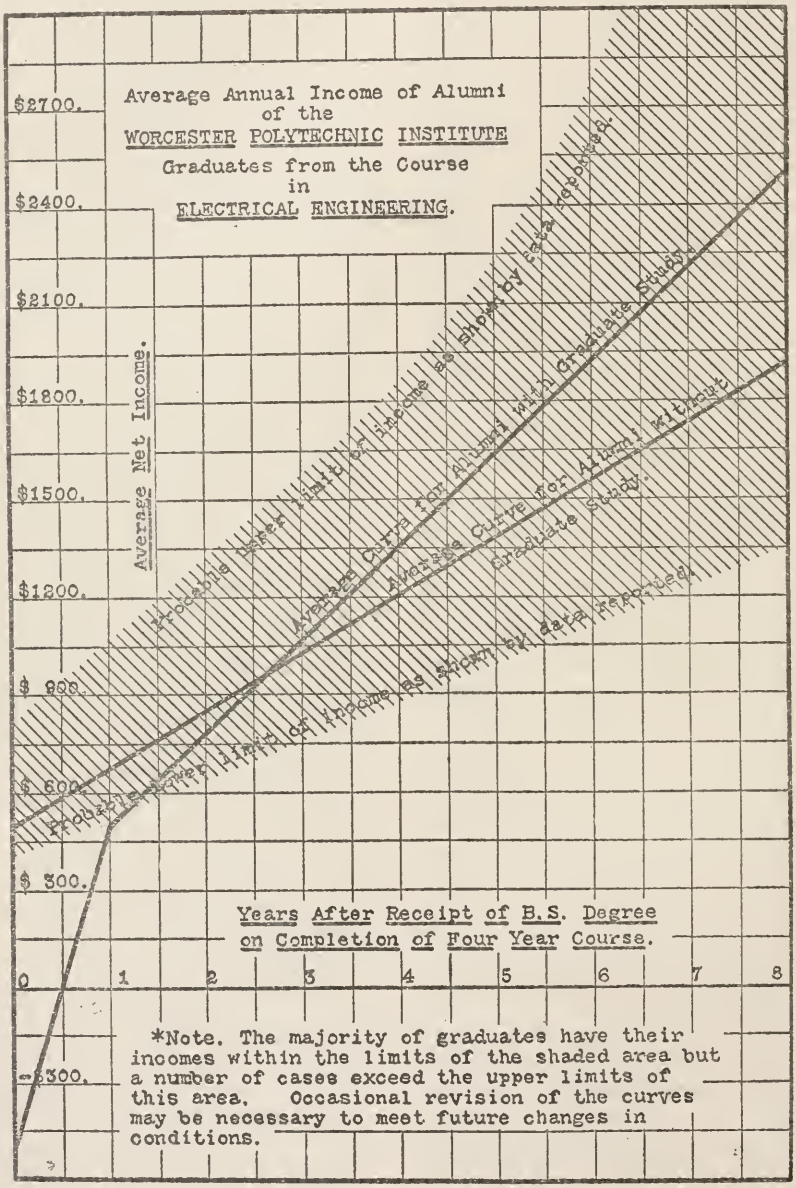
In this connection the following data, which were collected by Mr. Dodge, and presented by him in his recent presidential address before the American Society of Mechanical Engineers, are of much interest. From a large amount of material gathered by him elaborate tables were prepared, designed to show the earning capacity of both educated and uneducated men. From these tables it was found that the average unskilled man reaches his maximum earning capacity at the age of twenty-two; and that he is at that time earning $510 per year. This sum, capitalized at five per cent., represents the income of about $10,000; that is, the potential value of the average unskilled workingman is about $10,000.

The average man with the shop training is found to reach his maximum earning capacity at the age of twenty-four, and to be at that time earning about $790 per year. This amount, capitalized in the same way, represents a potential value of $15,800. Thus the money value of the shop-trained man is seen to be a little more than 50 per cent. greater than that of the unskilled laborer.

Comparing with these two results the earning capacity of those equipped with a technical education, the advantage is seen to be very greatly in favor of the young men who have delayed entering upon practical remunerative work, and who have expended the time and money necessary to acquire the education of an engineer. The age of maximum earning capacity has not yet been ascertained; but at the age of thirty-two, that is to say, ten years after graduation, the average income is still increasing. The figure given as representing a fair aver-

age for that age is $2,150, which, capitalized as before, represents a potential value of $43,000.

During the past year a table of results has been prepared by Harold B. Smith, professor of electrical engineering at the Worcester Polytechnic Institute, which bears directly upon the subject in question. The figures from which the table has been prepared were obtained from graduates of the electrical engineering department of the Institute; and they fully substantiate the conclusions reached by Mr. Dodge, and emphasize strongly the value of an engineering education such as that given by the Worcester Polytechnic Institute. The curve prepared from this table is here given, and the following statement in Professor Smith's own words is made in explanation of it:



"This diagram is probably unique in

that it shows most completely the financial prospects of technical graduates from year to year. As the department of electrical engineering at the Worcester Polytechnic Institute has been established but eight years, there are data available for this period only, but during this time a large number of students have graduated, and data have been received from a sufficient number of them to represent conditions fairly. From these curves, it is seen that the average graduate who receives $500 per year for his first position after leaving the Institute rapidly increases in value, so that, at the end of eight years, he may expect to receive an income of about $1900; or, if he has been a graduate student at the Institute for one year, his income is shown to average about $2500, which, capitalized at five per cent., gives him the income on an investment of about $50,000. By investing five years of his time and the cost of his college training, he has after a few years and for the remainder of his life, increased his income earning value by not less than $40,000."

LEVI L. CONANT, PH.D.

IS BEAVER BROOK A MENACE TO THE PUBLIC HEALTH?

ON the evening of January 16 a bill was presented to the City Council (and was referred to proper committees), petitioning it to remedy the existing evils of Beaver Brook. This petition was signed by nearly a hundred physicians, in fact, by all who were approached on the subject. The prevalent opinion expressed by the medical profession was that Beaver Brook, in its present condition, is a menace to the public health. It was worthy of notice how cheerfully the physicians signed, in spite of the fact that they were injuring their business by so doing. There was another list circulated among several hundred property owners along the course of the stream, as well as among some of the leading citizens. The demand for improvement was strongly expressed by many who had suffered from the unsanitary condition of the brook.

The subject was discussed at a meeting of the Board of Trade in November, 1902, and all agreed at the time upon the necessity of some action being taken. A map was presented at the meeting, on which the addresses of the malarial patients were shown by dots of red ink, and the breeding places of the malarial mosquitoes (anopheles) by a black "A." The relationship between the two was striking, as the sufferers from malaria rarely lived more than 300 yards from the breeding places, it being a well-known fact that the anopheles seldom flies more than 300 yards from where it lays its eggs.

Consequently, malaria was found thick east of Richmond Avenue, Newton Square, Pleasant Street (at the foot of Newton Hill), and Park Avenue. In the region of Chandler Street the cases of chill and fever extended back as far as Bancroft Street, and included Abbott, Maud, Dewey, Mason, and other nearby streets. At the foot of Charlotte, Downing and Beaver Streets were some sufferers. A family in the tenement at the foot of Beaver Street had the mother prostrated in bed with chills and fever, a little girl of four pallid with malaria, and a son of eleven with an "ague cake" easily felt in the abdomen. Malaria along Park Avenue was so prevalent in 1902 that as many as a dozen clubs took the matter up for discussion. Among these was the Worcester District Medical Society, which, after listening to a lecture, asked the Board of Health to make an effort to suppress malaria. The Board of Health should be given the credit of asking for an appropriation to fight the malaria and mosquitoes. The sum asked for was $1200. On the night the request was refused the City Council recommended that $25,000 be expended on the filtration beds below Quinsigamond.

The dangers of the mosquito were so persistently heralded in the Worcester Magazine of January, February and

March, 1903, and the daily papers that the people became alert to the spread of malaria. They began to screen their houses; to clean up the accidental receptacles; to petrolize stagnant water—to avoid being bitten by mosquitoes in more ways than one; so that in 1904 there was considerable less malaria than in 1902, at which time nine physicians living near Beaver Brook and Still Water Pond in South Worcester reported 2565 cases of malaria which they treated in one year. The south works of the American Steel & Wire Company gave ten per cent. as their loss of help from malaria. There were 125 house cases treated at the City Hospital, 25 at each the Memorial and St. Vincent's Hospitals, while the outpatient department treated hundreds of cases debilitated by either acute or chronical malaria or their sequelae.

This year Worcester headed the list of malarial cities of New England, certainly a most unenviable record, and in striking contrast to the absence of other infectious diseases, such as diphtheria, scarlet fever, and smallpox.

Dr. Hodge of Clark University, realizing the importance of Beaver Brook as a breeding place for the larvae of the culex (common) and anopheles (malarial) mosquitoes, has for several years past endeavored to reduce their number by spreading crude petroleum on the surface of the stream, the proportion being an ounce of oil to fifteen feet square of surface. Last May he interested the children of the Downing Street school, and Beaver Brook was "petrolized" for a time, but without any definite system. However, the diminution in the number of mosquitoes was very noticeable.

Petrolizing is practicable only as a temporary expediency to get rid of mosquitoes. It necessitates repetition about every three weeks to be successful, and should be superintended by some one having a thorough knowledge of the habits of the mosquito.

The permanently successful method is to drain the bogs and swamps, fill in the holes, and "train" or clean up the edges of the slow-running, grassy streams.

That is what is now proposed to be done with Beaver Brook in its worse part from Chandler Street to Webster Square. This means an initial expenditure of a considerable sum of money, probably about $25,000, but would not only benefit the public health, but beautify the part and afford an excellent and readily accessible driveway in the heart of the city.

As it is now the drive on Park Avenue is short, interrupted at one end at Grove Street, and at the other end at Chandler Street, by the electric car tracks. If the region of Beaver Brook could be constructed into a fenway from Chandler Street to Webster Square, similar to the fenway west of Boston, a continuous drive would then lead to Curtis Pond and the pines of Hadwen Park. Or, better still, if the improvements were begun at Norman Avenue, off Pleasant Street, instead of Chandler Street, it would do away with the marsh above the Chandler Street bridge.

At present there is a drop of only about a foot from Chandler Street to the Mill Street cascade. A dam could be constructed at the latter point of the current controlled at will. However, it is not necessary to have much of a current to insure the purity of the water. If the edges are "trained" (freed from brush, grass, dead dogs and cats, mattresses, chicken coops, wire bed springs, as shown by a recent photograph), and the stream stocked with little sunfish, perch, goldfish, sticklebacks and top minnows, the water will remain clear and pure. That is, provided the surface drainage is taken care of by a sewer instead of allowed to flow into the brook, as is the case now.

Ten or a dozen years ago, before the city used Beaver Brook for a catch-basin for the surface drainage, the water was clear and not so much contaminated. To "train" the edges an expensive but satisfactory way would be to wall the brook with concrete, making the channel about fifteen feet wide at the top, and considerably narrower at the bottom. It would take less concrete to make a straight channel, but more excavating. If the present course of the brook was followed with a few necessary cuts, the resulting fenway would be much more artistic in appearance with its curves, especially if an occasional pond was allowed where the channel is very wide.

The driveway would be on the west side of the stream, with the sewer running underneath it.

Suffice is it to say that the above improvements will have to be made in time. It is simply a question of whether it shall be done now or put off until after a severe epidemic of typhoid or some other infection.

W. J. McKibben, M.D.

STREET RAILWAYS—THEIR PROGRESS AND DEVELOPMENT.

[The following is the subject of a smoke talk given before Worcester Board of Trade, Thursday, January 19th, by Mr. Frederick A. Huntress, general manager of Worcester Consolidated Street Railway Co. It was illustrated by stereopticon views showing the various stages of street transportation from the days of the bus to the present heavy truck car of the present time.]

NOT until the latter part of the 60's did the failure of the omnibus to meet the requirements and demands for facilities for commercial and social transportation in the cities begin to force itself into public consideration, and stimulate inquiry as to better methods of transportation. The result of this casting about for a betterment was the street railway, and almost without exception the original railways were the successors of and a transformation from the bus line. But the horse-car, with its modern conveniences and more rapid pace, soon found such favor with the public as to become a necessity for general city transportation service, and the bus was relegated to the limbo of the outgrown and the superseded, and later, in answer to the demand for a more rapid means of transit than could be afforded by animal power, came the cable and electric trolley car, to work in like manner the downfall of its horse-propelled predecessor. These changes have taken place with various overlappings, as though the representatives of each were loath to part company, and in New York the tinkle of the street-car bell yet mingles with the loud clamor of the trolley gong.

The step from the omnibus as a means of regular city transit to the horse-car was more deliberately taken than that later to electric trolley, but this was largely due to the fact that when that form of traction asked admission to the field hitherto occupied by the omnibus lines, questions of franchises involved in the granting of rights to lay permanent tracks in city streets excited widest discussion and not a little opposition.

The steam railroads, aided financially and in other ways by the states and towns which they proposed to traverse, secured legislative permission to condemn property and acquire rights of way before the street railroads entered the field. But when the latter sought to operate within cities upon streets dedicated to public purposes, and used in common by vehicle owners and bus proprietors, they encountered vigorous opposition and were obliged to meet and overcome legal and social arguments, the echoes of which have not entirely died away.

The rails were laid in a manner far different from the present style of construction. Rails weighing twenty-five pounds to the yard were considered of ample strength and stiffness, and they were rolled in lengths little more than twenty feet. These were spiked to wooden stringers, which were held to gauge by being notched into cross ties and secured by dove-tailed keys. Cars were constructed with special view to lightness in weight. Wheels were made of a weight as light as 140 pounds, 180 pounds being a heavy wheel. The majority of the roads were originally equipped with the "bobtail" car, the body being ten or twelve feet long, front end enclosed with a circular dash, and a step on the rear, the passenger opening and closing the door as he passed through it. A fare-box on the right of the front door was expected to have the respectful attention and consideration

of every passenger. The passenger, we would say to-day, was such through dire necessity. If the car jumped the track, he got out and helped to lift it on again. If the horse or horses stopped on the upgrades to get his wind, or on account of the obstruction of snow or mud. the passenger got out and helped to make the start. He dropped his nickel in the slot, passed up that of his neighbor, and he seldom burnt the midnight oil in writing letters of complaint. But the bobtail car had only a short-lived existence. It was replaced by a larger car drawn by two horses and manned by a conductor as well as a driver, and the period between 1874 and 1884 may be fairly considered the one of greatest development in horse-car history, for during that time street railroads of the progressive cities of the country introduced and adopted many conveniences in the form and style of cars, and in their practical operation, and thus secured favorable recognition and a liberal patronage.

The demand for more extended and more rapid transportation brought into use the cable. The cost of both construction and operation of the cable system was so great that it was recognized that its application must be confined to narrow limits, and that a more flexible and economical system must be adopted for general use. In San Francisco, Chicago, and other cities throughout the country cable traction was in 1893 extensively used, but to-day is practically abandoned.

Outside the early work of Thomas Davenport, a blacksmith of Brandon, Vt., in 1834, electric railway work in America dates from about 1880, when Thomas A. Edison ran an electric locomotive over a track less than half a mile in length at Menlo Park, N. J. Since that time the development has been rapid and has called into service an immense number of men.

In 1883 an electric locomotive called the Judge was exhibited at the Chicago Exposition. This locomotive weighed three tons, and was operated by a third rail, drawing a trail car, and carried over 26,000 passengers during the two weeks which it ran.

In 1884 the Bentley-Knight Company equipped one of the first public lines on the East Cleveland Street Railway. About a mile of track had been equipped with a wooden conduit, within which the conductors were mounted. The first car was equipped with a brush arc light dynamo, used as a motor, suspended under the centre of the car body, and connected by steel wire belts to countershafts, which, in turn, were similarly belted to the axles.

In 1884 Charles J. Van Depoele installed an exhibition line about 300 feet in length at the Toronto annual exhibition, where an underground conduit, consisting of a wooden box fixed to the centre of the track, was used. The conductors were carried on opposite sides of box and current was taken by a plow, whose brushes made electrical contact with the conductors. The car was equipped with a 30 horse-power motor, drew three cars and carried about 200 people at a trip. In the fall of the following year the overhead trolley line was built. The line was one mile in length, and the trolley-pole, which was arranged very similar to an old well-sweep, was carried on top of the car, the rails being used as a return.

From 1885 onward Van Depoele built several roads under the supervision of Elmer P. Morris, using independent motor cars, and in the majority of cases the over-running trolley. The over-running trolley consisted of a traveler, an arrangement of wheels which ran upon the upper side of the wire, and which was attached to the car by two insulated wires. These cars were equipped with motors from five to ten horse-power each, mounted upon the platform, or inside the car at one end. Van Depoele seems to have been the first to have adopted the underrunning trolley as used to-day, although the value of his invention did not immediately appeal to him, and a number of his roads used the overrunning trolley.

Leo Daft designed in 1883 the electric locomotive "Ampere" for trial on the steam road at Saratoga. This motor was a double belt reduction, with both driving wheels engaged from a countershaft under the body of the locomotive. The Ampere ran successfully for several weeks, its best work, consisting in towing an ordinary coach containing sixty-

eight passengers. Following this experiment two or three small show roads were equipped by the Daft Company in 1884 at Coney Island and the Mechanics Fair, Boston.

Among the visitors to Coney Island was the manager of the Baltimore Union Passenger Railroad, who immediately invited Mr. Daft to visit Baltimore and equip one of their branch lines. After many trials and tribulations the Morse and Faraday were delivered, which were simply dummy cabs equipped with motors. The cars were then the ordinary 16-foot type, weighing about 5500 pounds. In August, 1885, the road first began regular operation and continued in successful operation for four years, or until 1889.

From 1885 to 1889 several experiments, and successful ones, were made upon the Manhattan Elevated Railway, with a view to the use of electric traction on the elevated roads of New York city. Leo Daft and Frank J. Sprague were most prominent and successful in this work, although electric traction was not finally adopted until December, 1902. The story of the hardships, successes and failures of these early engineers reads like a romance. I shall take the liberty to read a short extract from a paper by Frank J. Sprague, entitled "Some Personal Experiences":

Somewhat satisfied with the results achieved, however, I was one day sitting in the office at 65 Fifth Avenue, when Superintendent Chinnock, of the Edison station in New York, brought a proposition to buy a sixth of my interest for $30,000; his arguments were unanswerable, but his surprise and methods of criticism somewhat uncomplimentary when I declined the offer, although at the time I probably did not have enough to pay my board bill for a month. Having gone off for a short rest, I was one Friday summoned to New York by a telegram from Johnson saying that he had promised Cyrus Field that on the following Tuesday he would show an electric car in operation on the elevated railroad. How we got together car body, truck and machines and completed a regulator, in face of a strike, and assembled them all by Monday night on the elevated railroad, is more than I can at present tell, but that night found me with my faithful assistants, McPherson and Crawford, by candle light making all the connections necessary to operate two machines at 600 volts potential by duplicate switches at each end of the car, and to brake the car as well, with no way of testing the apparatus or to ascertain the correctness of any connection. At 1 o'clock the next day there was an expectant crowd on the Thirty-fourth Street platform, among whom were many men of prominence. While waiting for current, half an hour passed with no evidence of "anything doing," save under my breath, and there Johnson was the object of many an earnest anathema for his strenuosity, for I did not know whether either machine would turn over, or whether, if they did so, they would operate alike—in short, everything was in the air. Finally, when current was put on the line I first tried one machine and then the other, but with no movement in response. Finally, in sheer desperation, I threw both machines into circuit, moved the regulator, and the car responded perfectly. For two hours every feat which could be tried with the machines was attempted without a failure. It was with something of relief that I finally saw the car deserted, and, exhausted by the exciting experiences through which I had passed, I sat pondering over the day's results, when Chinnock again came to me, apparently much impressed with what he had seen, and this time offered $25,000 for a one-twelfth interest. I did not much care one way or the other, but he finally got it, and a few weeks later the other twelfth went to some one else for $26,250.

The result of the day's work determined Johnson and me to continue the experiments, and they were not terminated until December of that year; but in all those months, so far as I remember, not a director or stockholder of the Manhattan road ever took the slightest interest in what was being done."

It must be gratifying to Mr. Sprague that seventeen years later, almost to a day, the Manhattan Elevated were operating their trains electrically with a multiple unit control of his design.

In 1887 electric railways which had been previously confined to a few small roads, largely of experimental type, and operating at most only a few cars, received a great commercial impetus by the equipment of the street railway of Richmond, Va., by the Sprague Electric Railway & Motor Company. This installation, which included an equipment of forty cars, was perhaps the most notable event in the electric railway field during the six years, 1884 to 1890, and has been followed by enormous development in electric railways so familiar now to all. The general features of this road were as follows: Distribution by a single overhead line over the centre of the track, reinforced by main conductors and feeders from a central power plant operating at 450 volts pressure. The tracks were reinforced by supplementary wires, and constituted the re-

turn circuit. The current was taken from the overhead trolley line, at first by contact pressed vertically upwards, and subsequently by a trolley wheel carried on a pole over the centre of the car. Each car was equipped with two motors, 7½ horse-power, each supported on the truck frame, and could be operated in either direction from either end. The fate of this road, both technically and financially, lay for a long time in the balance, all essentials being time and again re-built, but Richmond, by common consent, stands as the pioneer road which, more than any other, was influential in creating the industry of the electric railway as it stands to-day.

Professor Short, while vice-president of the Denver University, and professor of physics in that institution, became interested in electrical work, and in the spring of 1885 constructed an electrical railway in Denver, Col. The track was of tee rails, the conductors supported on insulators between the rails. The car body was eight feet long. The success of the road was so great that Mr. Short was induced to give up his professorship and enter the street railway business. The conduit system was adopted, but later replaced by the overhead system. Later he equipped a road at Columbus, Ohio, 5½ miles long.

In the fall of 1887 Mr. Henry M. Whitney and his associates completed the consolidation of the eight horse railways in Boston, under the name of the West End Street Railway Company. Immediately the question of some better means of propulsion of cars was taken up. On investigation the best available power seemed to be the cable system, and it was practically decided to introduce a cable system in Boston. Land was purchased for power houses, plans were prepared, and it would have resulted in the installing of a cable system in Boston if Mr. Whitney's attention had not been directed to the overhead trolley system of Richmond, which was now in successful operation. On investigation of this road and others, it was decided to abandon the idea of cable and install a combination of the overhead trolley and Bentley-Knight underground systems. The first line equipped was in 1889 from Brighton to the beginning of the Back Bay at the Charlesgate, with the overhead system, and from that point to Park Square with the conduit system. So many disheartening failures attended the operation of the conduit system that it was finally removed and the overhead trolley substituted.

The first electric line built in Massachusetts was that on the Crescent Beach line of the Lynn & Boston, consisting of about a mile of track in length, opened on the 4th of July, 1888, consisting of one eight-bench open car. Very soon after, a second and third line were equipped and operated during the summer season, but with the coming of winter many obstacles were encountered in the way of snow and ice, and the question arose, could a snow-plow be operated by electricity? This question was solved by Mr. H. E. Farrington, at present the master mechanic of the Boston & Northern Street Railway Company, who conceived the idea of constructing a snow-plow somewhat upon the lines of the old-time horse-plow. The two motors were mounted on the body of the plow, connected to the axles by sprocket chains. Although the plow of to-day operated by motors mounted directly upon the axles is much greater in capacity and contains many modern improvements, the first idea has simply been improved, but not materially changed in design.

There existed in New York city in 1890 a widespread popular prejudice against overhead wires of all kinds, and the companies, electric light, telephone, telegraph were ordered to put their wires under ground, which practically stopped any trolley construction south of the Harlem River, and the cable system was adopted. In 1895 preparations were made to abandon the cable and substitute the conduit system. This form of construction cost from $90,000 to $125,000 per mile of single track, so it became very evident that only lines with heavy traffic would be justified in adopting this system, and there are to-day 725 horse-cars and 117 miles of horse-car track still in operation in New York city.

A paragraph in the New York Sun about August, 1887, seems curious reading to-day. It was in part as follows:

ELECTRICITY ON WHEELS.

They tried an electric car on Fourth Avenue yesterday. It created an amount of surprise and consternation from 32d Street to 117th Street that was something like that caused by the first steamboat on the Hudson. Small boys yelled "dynamite" and "rats," and made similar appreciative remarks until they were hoarse. Newly appointed policemen debated arresting it, but went no further. The car horses, which were met on the other track, kicked without exception, as was natural, over an invention which threatens to relegate them to a sausage factory.

Electric street railways were installed in nearly all the large cities and in many of the outlying towns and villages throughout the United States until, in 1894, there was an invested capital of $1,300,000,000, and further construction would have begun to wane if it had not been for the practical and successful application of the so-called three-phase high voltage transmission of power, rendering the economical distribution of electricity, and with it the interurban railway possible. In 1904 the street railway industry has grown to a capital investment of three and one-quarter billion dollars, and in thirteen years has increased its track mileage from 8123 miles to 29,830 in 1903.

The modern city street railway of to-day is installed with track construction, consisting of steel rails weighing from 60 pounds to 137 pounds per yard. There are over one hundred types of so-called standard shapes and sizes, according to desires of the municipal authorities of the cities and towns traversed. For city use the grooved girder rail is the type most generally accepted, and the tee rail for suburban service, although in several cities to-day trials are being made of high tee rail with a special form of block paving. This latter form of construction is preferable from an operating point of view, although the first cost is practically the same, yet the life of the rail is much longer. The great improvement in the methods of manufacturing steel has enabled the manufacturers to make switches, frogs, crossings, etc., called special work, so that the parts of greatest wear will last as long as the rails adjoining.

The overhead distribution consists of a hard drawn copper wire, suspended over the centre of the track, reinforced by copper conductors fed from the power station operating at 550 to 600 volts. The proper distribution of the overhead feeders, mains, etc., demands considerable study, for large sums may be expended without attaining the desired results.

The accepted types of closed cars to-day for city service are the 25 and 30 foot double-truck cars with longitudinal seats; for high-speed interurban service the cross-seat car is preferable. These cars without trucks or equipment of any kind weigh approximately nine tons each, and when equipped ready for service have a total weight of eighteen to twenty tons each.

The continual increasing of the weight of the car bodies and electrical equipment has caused development of trucks weighing more in many cases than the original horse-car with its entire equipment. Considerable thought and study has been given to obtain a truck that will furnish all the requirements necessary for easy riding and strength, at the same time keeping the weight as low as possible.

Wheels are generally of chilled gray iron, weighing from 400 to 550 pounds each, 33 inches in diameter, and are very carefully designed to meet the extraordinary strains put upon them in passing over switches, frogs, etc., and rounding curves. For interurban high-speed service steel-tired wheels are being used considerably, one of the principal reasons being that they have a higher power factor of safety.

Motors are of various sizes and types, according to the work they have to perform, ranging from 25 horse-power to those of 200 horse-power, each used in the New York subway. The number under a car may be two, three or four, and it has been found advisable to equip all cars 25 feet or over in this city with four 40 horse-power motors, giving a total of 160 nominal horse-power to each car. There are times when even this amount of power does not seem to be sufficient. The motors are mounted upon the trucks, two to each truck, and direct geared to the axles. All double truck cars are equipped with air brakes,

assuring to a considerable extent safety in operating heavy cars through the crowded city streets at a speed demanded by the traveling public.

The days of rice straw spread upon the floors of the cars, or coal stoves placed midway at one side are gone, and have been replaced by the electric heater, fulfilling the prophecy made in 1887.

The development of the street railway power station has made such enormous strides that it has increased from a station of 150 horse-power capacity to one of 100,000 horse-power, recently installed by the interborough railway of New York city.

From 1884 to 1889 the usual power station installation consisted of two or more engines of the high-speed type, driving directly by belts small generators. As the demand for electric current increased, stations gradually increased in size, and to secure greater economy engines of 300 horse-power began to be used, belted to a countershafting in order to drive satisfactorily the small generators then in use. Later still larger engines were installed, either driving a countershafting or belted direct to generators of 500 horse-power.

With the improvement in the design of generators, and the reduction in their speed, came the period of direct driven units, the generator being mounted directly upon the shaft of the engine. The next stage was the building of the large vertical engines and generators, which gradually increased to such units as are now operated by the Manhattan and interborough companies of New York of about 10,000 horse-power each.

The steam turbine unit is one of the latest and most important developments of the power station equipment. The largest unit of this type built at present is of 10,000 horse-power capacity, occupying a much less floor space than a similar size reciprocating unit. Power houses, car houses and car shops are not usually considered great addition to the beauty of a street upon which they are located, but such is not always the case.

All of us are more or less familiar with modern street railways to-day, for nowhere has the art and industry been so carefully studied and encouraged as in New England. Hardly seventeen years has elapsed since the first substantial road was constructed, and yet the growth has been so gradual that few realize what it has done for humanity. It has built, expanded and beautified the city. The crowded city has been expanded into the country; towns and cities have been brought into communication where before no communication existed; the value of property has been enormously increased; our streets have been made cleaner and healthier. In fact, the city of to-day is as unlike its former self as is the street railway little alike, in construction, equipment and operation, to its former predecessor.

FREDERICK A. HUNTRESS.

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The Board of Trade directors at their January meeting took up the question of a bonded warehouse for Worcester, which was advocated in the January number of the Worcester Magazine. It was represented that the importations to Worcester amounted to between $200,000 and $300,000 in duties, and would be materially increased if there was a bonded warehouse. Several importers were quoted who are obliged to keep their importations in storage in Boston and New York until needed, when they are taken out of bond. With a warehouse in Worcester, the importations could be stored upon arrival and taken out as needed. The result would be a large increase in importations direct to Worcester. The matter was referred to the Committee on Mercantile Affairs.

In common with other boards of trade and similar organizations, a resolution was adopted and sent to President Roosevelt, Secretary of State John Hay, Senators Henry Cabot Lodge and W. Murray Crane from Massachusetts, and Senator Shelby M. Cullom, chairman of the Committee on Foreign Relations, providing for the ratification of arbitration treaties between the United States and other nations. The Board of Trade went on record as saying that it believes that with only such exceptions as may be regarded as absolutely necessary, all international differences not capable of diplomatic settlement, should be settled by arbitration. The directors discussed several matters of local interest relative to better municipal conditions.

The Lackawanna Steel Company has recently installed at its works at Buffalo one of the most complete gas producer plants ever built. The plant is capable of gasifying 175 pounds of bituminous coal per day and consists of 16 Morgan continuous gas producers provided with the George automatic coal feeder. The arrangement of large coal tank and distributing crane makes it possible to utilize the last pound of coal in any producer, and a large battery and any additional gas units can be served without adding to the coal handling machinery, as one crane would be capable of serving about 100 producers. This crane or distributing car, designed by J. R. George, carries a fixed hopper of five tons' capacity, resting on scales. A boy operator sitting in the cage of the crane drawers, fills the crane tank from the central storage bin and discharges the coal as needed into the receiving hopper or producer in lots of 1000 pounds or less. The crane tank carries 10,000 pounds. The entire equipment was built by the Morgan Construction Company of Worcester, from its own designs.

John P. K. Otis, president and manager of the Union Water Meter Company, died January 1st, aged 51 years. He had been a sufferer from Bright's disease for two years, and was compelled to give up business cares last spring. He was born in Worcester, March 9th, 1853. After graduating from the Worcester Polytechnic Institute in 1873, he became assistant engineer of the water works at Springfield, Mass., and later was engineer of the Water Depart-

ment at Portland, Maine. From 1878 to 1881 he was instructor in civil engineering at the Worcester Polytechnic Institute. In 1890 he was made manager of the Union Water Meter Company, and in 1900 elected president and manager. He leaves a widow and five children. He was for several years a member of the Worcester Board of Trade, and this organization was represented at the funeral.

At the annual meeting of the State Mutual Life Assurance Company, January 17th, Hon. Herbert Parker was elected director to fill the vacancy caused by the death of Senator George F. Hoar.

At the meeting of the directors of Worcester Trust Company, January 17th, Mr. George F. Blake and Mr. Charles M. Thayer were elected directors to fill vacancies.

At the annual meetings of the national banks in Worcester, January 10th, Mr. M. J. Whittall was elected director of Worcester National Bank to fill the vacancy caused by the death of Josiah H. Clarke; Albert H. Stone was elected an additional member of the board of Mechanics National Bank; at the Quinsigamond National Bank last year's board and officers were re-elected.

Mayor Walter H. Blodget, delegate from Worcester Board of Trade, was in Boston January 17th, at a meeting of the Executive Council of the State Board of Trade in Hotel Vendome. "Transportation" was the question under discussion. Thirty-five members of the State Board attended.

The new railway post offices on mail cars, which are attached to trains leaving New York and Boston at noon, and passing through Worcester going west at 1.04 p.m., and going east at 4.40 p.m., are bringing to Worcester more mail than was formerly brought when the same trains brought closed pouches. There is not a heavy increase in the through mails, but there are more distributing points represented in the mails which come to Worcester. Postmaster James W. Hunt says there is a variation noted of from 150 pieces of mail down to smaller amounts brought on the train from New York. There is enough matter handled by the cars to warrant the installation of the service.

This is the result of the united efforts of the Worcester and Springfield Boards of Trade to obtain reforms in the mail service between New York and Boston.

Fred H. Cartwright, treasurer of the Cartwright-Borden Company, which recently went into the hands of assignees, has been elected general manager of the Eastern Biscuit Company, of Manchester, Ct. Mr. Cartwright has entered upon the duties of his new position.

Mr. J. Lewis Ellsworth was re-elected Secretary of the State Board of Agriculture at the annual meeting January 11th. Mr. W. D. Ross, delegate from Worcester, attended the meeting.

Congressman John R. Thayer was the nominee of the Democratic members of the Massachusetts Legislature for Senator, against Hon. W. Murray Crane, nominated by the Republicans, for the short term to succeed the late Senator George Frisbie Hoar.

Harlan Page Duncan, president and general manager of the Duncan-Goodell Company, 404 Main Street, resigned his position January 11th, and announced his intention to retire from active management and participation in the affairs of the company of which he has been president for many years, and with which he has been connected for over fifty years. He still retains his interest in the business. Ill health is the cause of Mr. Duncan's retirement, and he will take a rest he has long needed.

William H. Dexter was 82 years old January 11th, but made no special observance of the event. A short time before his birthday he gave to the trustees of Worcester Academy the business block, 544 and 546 Main Street, valued at $70,000, in order that the institution might come in possession of the $10,000 gift made by Chester W. Kingsley of Cambridge, before his death. It was given on the condition that the Academy should raise $100,000 before January 1st, on the amount now raised. Mr. Dexter has substantially remembered the First Baptist Church, of which both he and his wife are members, the town of Charlton, his native place, and Mrs. Dexter has given a dormitory to Colby College, in Waterville, Maine.

The Aeolian Weber Piano and Pianola Co., makers of the Weber piano, is to make its piano cases in Worcester. The company has leased the Estabrook building on Jackson Street, and will begin work as soon as the machinery is installed on the four floors of the building it is to occupy. Mr. Albert C. Collyer of New York, master mechanic of

the company, has been in Worcester looking after the details of installation of the business. He says the company is coming to Worcester for the reason that there is not sufficient room in its factory at 17th Street and 7th Avenue, New York, where it has been in business more than half a century. It is figured that 150 piano cases will be turned out in a week, which will require about 300 skilled working mechanics.

W. E. Wheelock, President of the company, which has had its headquarters at 108 Fifth Avenue, New York, who has been in Worcester several times to arrange for the lease of the Estabrook building, has given instructions that work is to be pushed in the kiln rooms and the elevator.

The Weber company has among its allied interests the Vocalion Organ Co., which occupies a building adjoining the Jackson Street factory, but the coming to Worcester of the case-making plant will not have any effect upon the organ building establishment, except perhaps to work it more regularly and with a larger force of workmen than has been the rule in the past fifteen months.

Mr. Collyer said that the factory to be opened will be one of the most important of its kind in the Commonwealth of Massachusetts, from the fact that the highest grade materials and the most skilled workmen will be employed, the factory operating the year round.

Mr. Collyer's statement is: "For the present it is not intended to do any finishing in the Worcester factory," he said. "That will be done in New York, whence the cases, ready for what is technically known as varnishing, will be sent as rapidly as they can be turned out.

"Piano-case making involves the use of high-grade woods and the finest veneers, which will be sent here for shaping, while in the kilns, which are to be of the most approved type, we will dry our lumber. These kilns are equipped with fans which draw out the moist air and force in dry air, the result being a continuous current, drying and seasoning the wood so that it will stand the test of time.

"The cases are sent to the factory, where the interior mechanism, stringed frame, keys, pedals and the ornaments are put on, and afterward the varnish and polishes are applied, the completed instrument being kept in the store-room and finally tuned and tried. If satisfactory they are sent out."

Hon. David Manning, a former member of both branches of the Massachusetts Legislature, and prominent member of Worcester County Bar, died suddenly at his home on Woodland Street on the morning of January 5th. He was born in Paxton, August 29th, 1846, son of David N. and Lucy A. Manning, and the first ten years of his life was passed in Leicester. Since that time he had been a resident of Worcester.

He was educated at the public schools of Worcester and entered Yale University, graduating with the class of 1869, of which Congressman John R. Thayer was also a member. After graduation, Mr. Manning returned to Worcester and began the study of law, spending a part of his time at Harvard Law School. He was admitted to the Massachusetts bar in 1872, and for the six years following was connected with the office of W. W. Rice and Francis W. Blackmer under the firm name of Rice & Blackmer. After that, he was for two years in partnership with Burton W. Potter and since then had been in his own office. He was appointed Associate Justice of Central District Court in 1881 by Gov. Long, which position he held until 1897, when he resigned to accept the Republican nomination for Representative from Ward 7. He was elected and became prominent through his action in the Committee on Liquor Law. He was again elected to the lower house in 1899 and remained there for two years, serving on the Committee on Judiciary. He was a member of several local organizations, had been a valuable member of Worcester Board of Trade, was a director of the Hopeville Manufacturing Co. and prominent member of the Church of the Unity.

The funeral took place January 8th from the family home on Woodland Street, services being conducted by Rev. Dr. Samuel A. Eliot of Cambridge, son of President C. W. Eliot of Harvard University. There was a large attendance, several organizations being represented.

The portrait of Mr. Rufus Bennett Fowler, President of Worcester Board of Trade, has been received from the Schervee galleries, and has been hung on the wall in the directors' room. Mr. Fowler was President of the Board in 1900 and 1901. This portrait completes the list of presidents since the reorganization of the Board in 1891, they being, in order, C. Henry Hutchins, Arthur M.

Stone, Hon. Charles G. Reed, Irving E. Comins, Rufus B. Fowler, and Walter H. Blodget, the present official being Mr. H. W. Goddard.

Rev. Calvin Stebbins of Framingham, formerly pastor of Church of the Unity, has been appointed by the trustees of Clark University to prepare a memorial sermon on Mr. and Mrs. Jonas G. Clark, at the University, on February 1st, the anniversary of the death of Mr. Clark.

Dr. L. P. Kinnicutt, the head of the chemical department, Worcester Polytechnic Institute, has received from Director Roberts of the U. S. Mint, a notification that he has been appointed by President Roosevelt as one of the commissioners to examine and test the fineness and weight of the coins reserved by the several mints of the United States during the calendar year 1905. The first meeting of the commission will be held at the Philadelphia mint early next month. This commission, which is usually spoken of as the "Annual Assay Commission," is appointed each year by the President, and its duties are to test by means of weight and assay the accuracy of the work done by the mints of Philadelphia, San Francisco, New Orleans and Carson.

Mr. S. F. Hall, a graduate of the mechanical engineering department, of the class of 1900, was a recent visitor at the Polytechnic Institute. Ever since his graduation, Mr. Hall has been at the Niagara Falls plant of the Norton Emery Wheel Co., of this city. At the plant at Niagara Falls the new abrasive material, alundum, is manufactured, and with the development of the machinery connected with its production, Mr. Hall has been intimately associated.

The Washburn Shops have been exceedingly busy of late in the filling of commercial orders, both domestic and foreign. Several wet twist drill grinders have been ordered from England and an unusually large order for drawing stands was booked a short time ago. The Shops have also just completed a "dux" feeder for printing presses. This feeder is a new invention designed to do away with hand feeding in job work.

Dr. L. P. Kinnicutt attended as the official representative of the Polytechnic Institute the inauguration exercises of the new president at the Brooklyn Polytechnic Institute, two weeks ago.

Mr. Charles Adams, for many years Assistant Superintendent of Public Buildings, has been appointed a member of the inspection department of factories and public buildings connected with the Massachusetts State District Police.

Inspector Adams has already entered upon the duties of his new position, and much of his time will be devoted to inspecting buildings as a member of the State police force, where formerly he inspected the same buildings as Assistant Superintendent of Public Buildings for the city of Worcester.

Hon. Frank S. Black, formerly Governor of New York, will be the principal speaker at the Republican Club's annual banquet to be in the Bay State House, Thursday night, February 16th, when it is expected to entertain between 175 and 200 members and invited guests.

The Spencer Wire Company has added a new and important department to its plant on Webster Street to manufacture music wire, tempered steel card wire and all other kinds of high grade wire which the company has never before attempted. The department will occupy a new building just completed. It is of brick, three stories high, 50 x 125 feet on the ground, and of the most substantial construction. Charles Johnson, formerly of the Worcester works of the American Steel & Wire Co., will be superintendent of the department. Mr. Johnson has had twenty years of experience with this class of work and is recognized as one of the best men in the line in the United States.

W. H. Blodget, Jr., has returned from the convention of the National League of Commission Merchants at New Orleans. He was a delegate and went to New Orleans with a party.

THE WORCESTER MAGAZINE

Vol. VIII. MARCH--1905 No. 3.

Magazine and Municipal Comment.

Rebuilding of the Cradle.

The Employments of Our School Children.

Hon. Chauncey M. Depew's Eulogy on Senator Hoar.

Board of Trade Notes.

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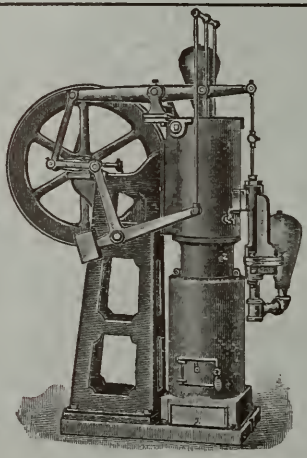

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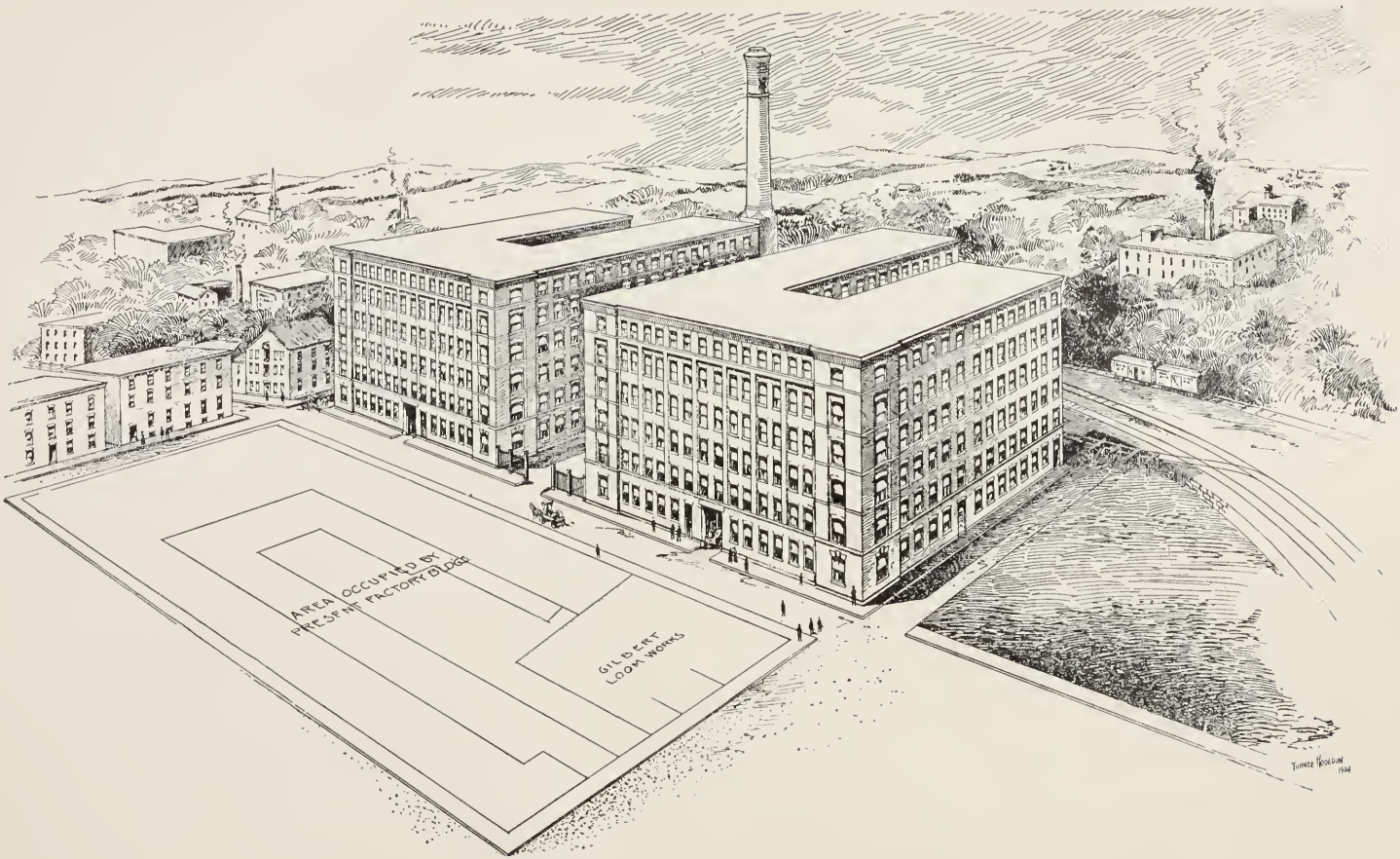


PROPOSED NEW MERRIFIELD BUILDINGS—EAST SIDE OF UNION STREET.

The Worcester Magazine.

Vol. VIII. MARCH, 1905. No. 3.

This magazine is published by the Worcester Board of Trade. Its reading pages are devoted solely to municipal development, good citizenship and the business welfare of Worcester. Space in these pages is not for sale.

MAGAZINE AND MUNICIPAL COMMENT.

Will Not Cut School Year

In connection with discussion which is constantly going on in the School Committee and City Council of school affairs, the suggestion has been made that on account of lack of finances it may be necessary to close the schools one month of the present school year. That argument is put forth in order that school teachers may be paid with the appropriation made for teaching.

This is an argument that comes to the surface every year, but so far the school year has never been cut. There is no likelihood that it will be this year. In order to create a bit of a scare, some one advances the one-month cut with persistent regularity. This would mean that school teachers would receive pay for nine months of the year instead of ten. Without delving into legal lore or analyzing the exact wording of statute, it is apparent to any one that a cut of one month's schooling, in order to save a month's salaries, will not be made. The statute provides for forty weeks' schooling in high schools. Teachers in the public schools are elected for one year, to be paid in ten equal installments. That is just as binding a contract as the city can make with any of its heads of departments. While it is realized that the expenses of maintaining the public schools are large, amounting to 46% of the total tax levy, there does not seem to be any disposition to decrease the annual expenditures. The School Committee is body unto itself, and has full authority to fix salaries, but other expenditures have to be approved by the Mayor. This gives the head of the municipality a means of check on excessive expenditures for school maintenance, but the salary question is entirely out of his hands, and it is this proposition that calls up so much criticism.

There should be economy used in the running expenses of the public schools. There are many loopholes that could be easily plugged, but to raise the annual cry of closing the schools a month is far fetched. Of the total tax levy of $1,400,000, more than $600,000 goes to the School Department.

The recent organization of an educational association, comprised of men and women well informed in school matters, should have good influence on the public school question in this city. The purpose of this newest organization is to consider public school matters, confer with the school officials and school committeemen, to work out for Worcester as practical a campaign of education as possible, to eliminate where needed, to add where needed, but to give as good education as possible, at the same time reducing the cost where it can be done. If such an organization can bring about a more practical and economical system of schools, it will have solved a problem which has needed solving for many years.

Bring the School to the Man

A statement has been made from an authoritative source that more than 90 per cent. of the people in the United States have received, or are receiving, education no higher than primary or grammar school. Statistics clearly show that out of every one thousand men, women and children now attending school, 948 are in primary and grammar grades, 39 in high and preparatory schools, and only 13 in colleges, Normal and technical schools. The struggle for existence is keen, and a great majority of men are forced to enter their callings without any special preparation, and once in school days are over. The expense in time and money of attending a technical school is so great that only a favored or unusually determined few are ever enrolled in such institutions. Few men, comparatively, have minds sufficiently trained, or hands sufficiently skilled, to keep apace with the marvelous development of industrial life, and forge ahead to positions of responsibility. The rank and file are in the machine shops and factories.

The small enrollment in technical schools shows how hard it is to bring the men to the school. A new force is working to bring the school to the man. It is said that nearly a million men and women have been, or are now, enrolled in the technical correspondence schools of the country. This education is being received without serious interruption with daily labor. Such men study during their evening hours with a definite purpose in view. This is shown in the technical course which the local Y. M. C. A. gives. In doing this they become possessed of the secret of success, namely, that their futures lie, not with unions or socialistic government, but with themselves.

Up to the present time those home study courses in practical work are carried on only by private institutions, or in connection with two or three great colleges. But the benefits are so great to both employer and employed that employers' associations in each trade or industry should give earnest consideration to some plan of offering to every employee home instructions, supplemented by shop practice. If trade unions could be brought to see that the greatest good they could do their members would be their education along practical lines, better still would be the results. A union card backed up by some such system would be welcomed in a shop of wide-awake employers, and the competitive demand for men of the higher grades would ensure higher wages for good men than the unions will ever be able to force on employers by present methods.

Another Year's Delay

Almost every day one reads of a frightful grade crossing accident with deadly results. Yet the work of abolition of grade crossings drags along at snail pace. For a dozen years it has been the theme of discussion in Worcester, and the end is not yet in sight. The abolition of grade crossings is a duty that belongs to the State governments, so we find more progress made in some states than in others, although in hardly any of them is the work pushed as rapidly as it should be. Worcester stands out as a striking illustration of this assertion. To put off from one year to another the expense of abolishing these deadly crossings is the determination of railroads, and every point for delay is contested. Railroads have been in use in this country more than a century, and wholesale human slaughter at grade crossings is still heard about. Killing thirteen of a sleighing party at Hornellsville, N. Y., and a few days later a trolley car and steam train collision in Grand Rapids, Mich., add emphasis to the gruesome object lesson. Such accidents seem to come in waves.

During the last year 105 persons were killed at grade crossings in New York State. Under the law of that Commonwealth, half the burden of removing grade crossings falls on the railroads, and the other half is divided between the municipalities and the State. The State appropriation for the purpose is limited to $100,000 in any one year. In two of the years of Governor Odell's administration he vetoed the entire appropriations for that purpose, and during the past two years only two remov-

als of grade crossings have been recorded.

Massachusetts has put herself into very creditable contrast to that exhibit. She has been making an effort that shows that the people and their representatives appreciate the gravity of the situation, and are advancing for its relief as fast as the finances of the State will permit. New York is territorially many times larger, and boasts of her wealth and her enterprise, but where she spends a hundred thousand to safeguard life at these danger points, when the Governor doesn't veto the appropriation, Massachusetts spends five hundred thousand, which is a little over a third of the amount required to be expended in a single year.

The Worcester grade crossing proposition is an annual feature of the Legislature. This year it is the Union Station location, and another year's delay is the result.

Employments of School Children

A representative from the German schools, who was delegated to attend the St. Louis Exposition, visited Worcester on his return. To get a good idea of the school system of our country many of the high schools of New England were visited, the English high school in this city being included. He asked the question if any of the scholars of the English high school did any outside work. The reply being made that they did to a considerable extent, he expressed surprise and said that could not be in Germany. A scholar would have to give up one thing or the other, school or work. This was a pointer for the English high school teachers to make a quiet investigation, with the result that at a recent meeting of the Woman's Club a paper on "The Employments of School Children" was read by Miss Mary Trumbull, teacher in the English high school.

This paper shows by carefully prepared data what the effect upon the pupils has been for several months where there has been outside work done by them. The paper created some little talk, and opens up an important question in schooling. It is shown that some of the pupils have dulled their keen sense by excessive outside employment. Physically and mentally this method is argued as a detriment. The paper in full is printed in the Magazine, and should be read by every parent whose child is attending school and employed out of school hours.

Savings of New England

Mr. Albert P. Phenis has contributed a series of articles in the Manufacturers' Record on "Reasons for New England's Industrial Growth" which is intended as an inspiration for the South. In bringing his article to a close he reviews briefly a few remarkable things about New England, and some surprising statements are made. Here are a few of them: In spite of drawbacks, New England has taken the lead and held it in almost innumerable lines of manufacture. Two-thirds of all the capital invested in the textile industry in the United States is in New England. * * * * It is truly a mechanical country. I speak especially of Massachusetts, Rhode Island and Connecticut. There are the true mechanics. In these three states there are more workmen of intelligence than in all the rest of America. It is the birthplace of workers—one can even say artists—of the first order, who transmit their skill through inheritance from father to son. * * * The most striking trait of the New England character is ingrained thrift. Having from the first to hustle to keep from starving and freezing, having to take advantage of every opportunity to make the most of circumstances and husband resources often of the slenderest sort, the New Englander is characteristically a man who works without ceasing in the attainment of an object, and he is usually prepared for his opportunity when it comes. His habit of putting by a portion of everything he acquires is well illustrated in the showing of the savings banks of New England. They contain $1,134,000,000, or more than one-tenth of all the savings deposited in the world, and more than one-third of all the savings deposited in the United States. Out of a population of some 6,000,000, there are 3,000,000 depositors

in the savings banks of New England, with deposits averaging $378 to each depositor, and $189 to every individual man, woman and child in New England.

Neglect Simple Precautions

In investigations made in regard to health of workmen and the sanitation of factories by the State Board of Health and by Professor Sedgwick, the Lowell Institute lecturer, the findings were the same, although both were working independently. It is a fairly conclusive demonstration of the correctness of the findings, because both investigations of the subject reach the same conclusion, one being based upon an examination of actual conditions, and the other upon the researches of all the workers in this field. The conclusion is that in all of the industries which are regarded as dangerous to health, the operatives are largely to blame because they neglect simple and obvious sanitary and hygienic precautions.

While it is the duty of the manufacturer to provide, as far as possible, sanitary conditions for the workmen in his establishment, something more than the providing of sanitary appliances and hygienic conditions is needed. The workman must be compelled to use them. It is of little use for the State to pass laws providing for the better condition of the workingmen in factories so long as the workingmen disregard the obviously necessary sanitary precautions. The manufacturer can do more than the State to compel sanitary conditions in his shop, and if cleanliness and neatness are insisted upon as requisites for employment, there will be a great improvement in many of our manufacturing establishments.

Memorial Days in Congress

The days set apart by the United States Senate and House of Representatives for memorials to Senator George Frisbie Hoar brought out the eloquence of the nation. On Jan. 28 sixteen senators paid tribute to the memory of Massachusetts' senior senator, and on Feb. 12 the House paid similar tribute, Hon. George P. Lawrence being speaker pro tem. for the day. There were eleven speeches in the House, including those of a majority of the Massachusetts delegation.

A feature of the Senate memorial was the speech of Hon. Chauncey M. Depew, which is published in this number of the Magazine. Upon the death of Senator Hoar the sentiment was freely expressed in the newspapers that by Senator Hoar's death the last of the great statesmen was removed; that the Senate had seen its best days; that the present age produced no such men as Webster, Sumner, Calhoun, Douglas, and Hoar. It was to such sentiments that Senator Depew took exceptions, and in one of the most scholarly and forceful eulogies of that memorial showed that the Senate of to-day had among its leaders men who are as strong intellectually and as patriotic as any of those names who, in the earlier history of the country, took such determined stand, and by their oratory became recognized as great leaders and great statesmen.

Hustle of the South

A little of the enterprise of Jacksonville, if taken on by Worcester people, would have effect only for good. The Board of Trade in that city illustrates the genuine hustle and public spirit of the new South. In reaching out for business New England is realizing the determination of business men of the South to build up that section of the country. The report of the Board of Trade of Jacksonville shows that during the last year it has built a home of its own; its annual dues have been increased to $20 a year, with additional quarterly dues; its membership has increased, and genuine public spirit is shown in its every act. In inviting its northern friends to this chief city of Florida, it says, "Don't come if you are merely a promoter of 'splendid business schemes' with the expectation of finding capitalists ready to put up the cash against your experience; if you are plucky and energetic, and know how to embrace an opportunity when you see it; if you want a good, all-round climate, and have hustle in your makeup, come."

REBUILDING OF THE CRADLE.

WHAT is considered the most practical proposition for the business growth and expansion of Worcester is that which contemplates the rebuilding of the Merrifield buildings. This has been long under consideration, carefully considered by the most conservative business interests, and approved by men whose names have been closely linked with the growth and development of Worcester.

For fifty years the locality along Union, Exchange, North Foster and Cypress Streets has been the city's industrial centre. There it is that its industries have grown, developed and broadened, until they have made Worcester the foremost manufacturing city in the United States. It was in this "cradle of industry" seven of Worcester's ex-mayors saw the birth of their industrial life, and by their own determined effort and business capacity witnessed the development and expansion of a business started in a small way. Of the 1100 varied manufacturing plants which belong to this city, a great many of them were rocked in their infancy in this industrial cradle. It is to the credit of Worcester that its industries had a small beginning, for it is slow growth which makes the solid foundation of anything. It is only because the founders of these business enterprises rested on faith in the city of Worcester that they have grown and developed into most important manufacturing plants.

Worcester has now reached a point where her reputation has extended, and people in the mechanical world have seized upon it. Many industries have been and are now headed towards Worcester, and there is and has been a vital need of a larger and more modern manufacturing centre than what the Merrifield buildings are to-day.

The proposition, which has met the approval of the wisest business heads, is a continuation on broader lines of an established business that has been in the centre of the city for more than fifty years. Such a plant is needed to meet the constant enlargements of Worcester's industries—the various arteries through which the business blood has been pumped to the throbbing Heart of the Commonwealth.

If it were necessary to review the early business struggles and development of what to-day are the important plants of this manufacturing city, there could be called up the names of men who, in a way, have been responsible for the industrial growth of the city. It was in these buildings that ex-Mayors Samuel Winslow, Samuel E. Hildreth, Charles G. Reed, Clark Jillson, Phinehas Ball, James B. Blake and Charles B. Pratt experienced their first start in the business world. All of these men worked at the bench, from which they forced their way to the foremost rank of Worcester's prominent manufacturers. What is true of these ex-mayors is true of a hundred other men of equal prominence, whose names are better known in the manufacturing than the municipal or political world. Into this cradle of industry there has for half a century been the silent dropping of infant concerns, about which little was heard until they had gone through the developing stages and maintained their independence by constant, steady growth.

If this proposition of a manufacturing centre which originated with William T. Merrifield was a success fifty years ago, when Worcester had a population of less than 25,000, it is fair to presume that, with its present population of over 130,000, and still growing, it would be an absolutely guaranteed success from investors' standpoint where modern ideas of power and its transmission are considered. In connection with this central plant the following from Worcester Magazine of October, 1901, written by Harriette M. Forbes, daughter of Mr. Merrifield, is reproduced in part:

"The modest sign, long hanging at the entrance to No. 100 Exchange Street, might be passed daily for years without attracting the attention of the average man, but the painted words mean much to Worcester—

ROOMS WITH POWER TO RENT
100
EXCHANGE
W. T. MERRIFIELD
OFFICE

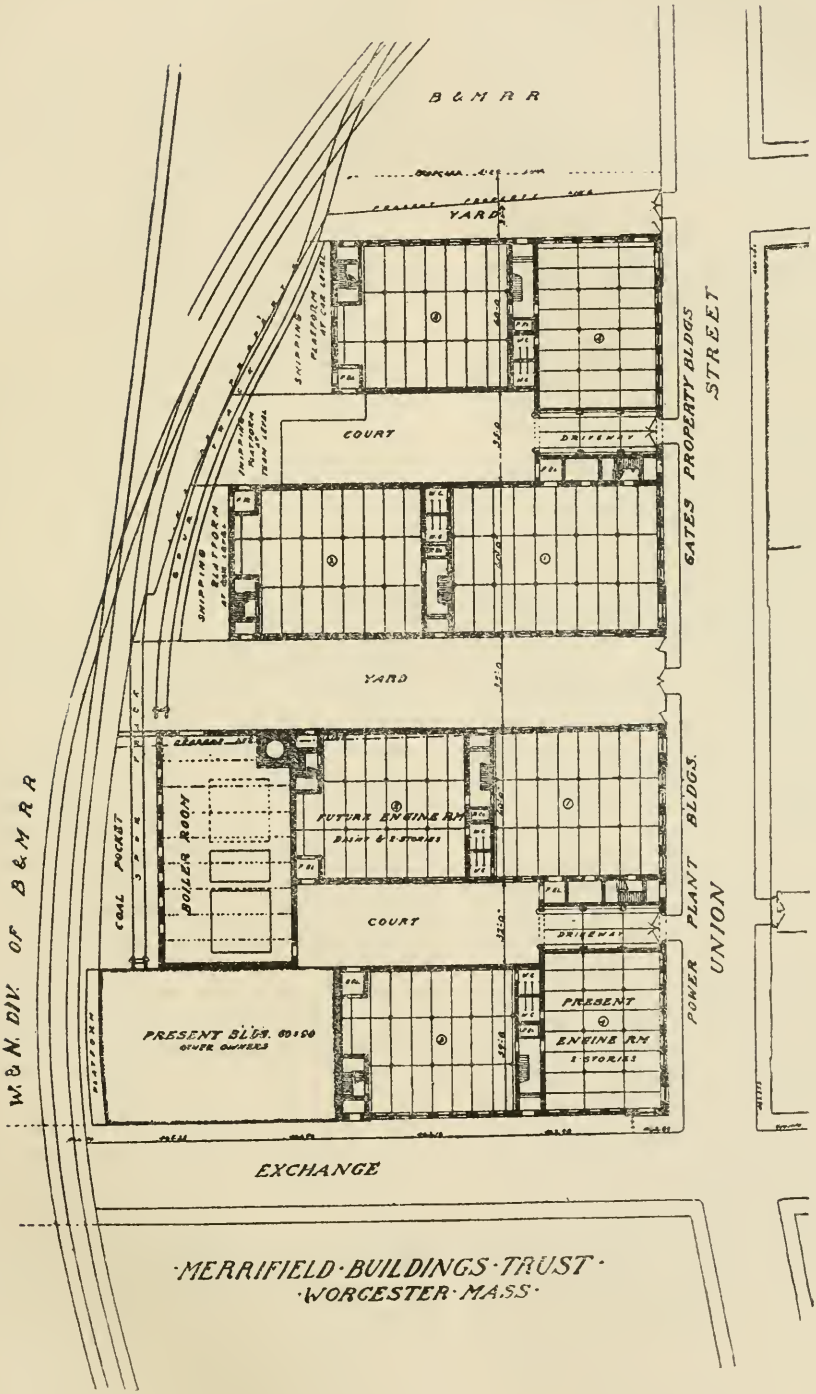
"Possibly one in a hundred of the men who visit the city may see this portion of Worcester, but right here is made a considerable part of the wealth which renders the exhibited sections of the Heart of the Commonwealth possible. Perhaps issue may be taken with the statement, but it would seem reasonable that churches, schools, museums and stores are results rather than causes, and somewhere there must be digging and delving that the glittering consequences may follow.

"William T. Merrifield was not yet thirty-two years old when he made his first purchase of land in this section, and, singularly enough, that purchase covered the site of the office which for more than sixty years has borne his name. Jan. 10, 1839, is the recorded date of the conveyance to him of land on the north side of what was then Columbian Avenue, now Exchange Street, extending northward to the brook, and having Union Street on the east. Nearly four years later he secured land on the south side of the avenue (Exchange Street), including a wooden building and an engine, and therein he manufactured window-sash, blinds, doors, shingles and other building material, for it will be remembered that long ere this Mr. Merrifield was a successful contractor and builder.

"In 1848 Mr. Merrifield began the erection of a long building on the west side of Union Street, and began the renting of rooms therein, along with power, to mechanics who needed just such an opportunity. Here was one of the foundation stones in the city's prosperity. The next year, this long Union Street shop was extended to North Foster Street, and more rooms were rented. The new quarters were appropriately dedicated by the holding therein of the second exhibition of the Worcester County Mechanics Association, which occupied the whole of the building for the week beginning Sept. 18, 1849. In 1851 the original wooden edifice was moved to the westward, and a four-story structure took its place, extending down Union Street and along Exchange. As with the new building of 1849, so with this latest, the third exhibition of the Worcester County Mechanics Association was held in it for the week following Sept. 16, 1851.

"There was still a demand for room and power, so that, in 1852, Mr. Merrifield was warranted in buying land and in erecting thereon a building extending to Cypress and extending down that street. In 1853 the same quality of facilities was extended the entire length of Cypress Street. Then, too, there was a long edifice running towards the south between the Union and Cypress Street buildings. All of these edifices, excepting the last named, were four stories in height, the first of brick, the upper three having wooden framework with brick facings four inches in thickness, all surmounted with roofs, nearly flat. The location of the power plant was on the west side of Union Street near the corner of Exchange. These long ranges had become veritable hives of industry, sending out a greater variety of manufactured articles than any other equal amount of space in the world, and the energetic instigator of all of this activity was not yet fifty years old. It was Wednesday, June 14, 1854, when, in a few hours, the merciless flames consumed the accumulations of years. * * * An enumeration of the firms that were making fortunes for themselves and the city would be a pleasant feature of this article, but in a word, they were the forerunners of the paladins of industry who to-day keep the name of Worcester in the very forefront of the world's workers. * * *

"What might have appalled a heart less firm, only roused in Mr. Merrifield a determination to rebuild and to improve. Even while the fire was raging most fiercely, plans were forming in his fertile brain whereby he might again set his wheels in motion. The embers were not cold when the late tenants were called together by their landlord, who wished to know how many would wish rooms



FLOOR PLAN OF PROPOSED NEW BUILDINGS ON EAST SIDE OF UNION STREET.

and power of him when he rebuilt, which he intended to set about immediately. Apparently, the results of the conference were satisfactory, for the phoenix act was repeated with variations, to the advantage of all concerned. How much this fire stayed the march of prosperity it would be difficult to tell. It is certain that some mechanics left the city, carrying their works elsewhere, but so quickly were their places taken there was little seeming interval.

"The system that Mr. Merrifield inaugurated for a nominal sum per square foot for rental space annually, and sold power, proved a popular and practical method. The inventive genius had no need of care as to his power. He had only to run on his belt and his machine was in motion. The great works of Washburn & Moen started in this manner, and not till after the death of Ichabod Washburn were works, so long rented, purchased by the company. A similar course has been followed by scores of men whose names are now famous in the manufacturing world.

"Worcester ought to be proud of the fact that. in this array of tenants, are found no less than seven of her chief executives. Fostered in the Union and Cypress Street shops, the several kinds of business grew and flourished till they outgrew their location. To-day the place is a scene of activity. There may be seen securely founded lines of work that are as old as the building, and whose managers have for these nearly fifty years paid their rental to the projector or to his estate. What better testimonial could we have of the character of the man and of his enterprise? An enumeration of the industries driven by the Corliss engine of to-day would be a sufficient answer to the question, so often asked, as to why Worcester does not suffer in times of business depression as do some of her sister cities in the Commonwealth. Evidently, the extent and variety of her forms of labor render her less sensitive to market changes than places whose sole dependence is one great industry. The people of Worcester think. and with justice, that no one has contributed more to this condition than their late esteemed and revered fellow citizen, W. T. Merrifield."

The new proposition has sufficiently developed as to warrant the rebuilding of the plant. The initial building will be on the east side of Union Street. After its completion, and it is put on a practical base, the demolishing of the present buildings on Union, Exchange, Cypress and North Foster Streets will follow, and buildings in character to those on the easterly side of Union Street will be erected to take their places. The work, when started, will be hastened to completion. There have already been received a sufficient number of applications from tenants for space in the buildings on the east side to warrant the erection of them.

The Merrifield Buildings Trust has been organized by Declaration of Trust made by Henry K. Merrifield of Worcester, Samuel L. Powers of Newton, and Leslie C. Wead of Brookline, as trustees, on the basis of the well-known real estate trusts of the city of Boston. The trustees will purchase several properties situated in the heart of the city, on Exchange, Union, North Foster and Cypress Streets, and will make a consistent substantial development by the erection of buildings, including power plant, for rental to manufacturers.

There are three lots now belonging to the Merrifield estate, containing respectively 27,777, 3810 and 60,748 square feet, making a total of 92,335 square feet; also, adjoining the lot on the southeasterly corner of Exchange and Union Streets, a lot now belonging to John Gates' Sons, containing an area of 37,220 square feet. Plans for the improvement of these properties have been prepared by Lockwood, Greene & Company, architects and engineers, with estimates of the cost of the buildings and equipment.

The plan contemplates the erection at once of the buildings on the easterly side of Union Street. These buildings will be six stories in height, will cover a ground area of 43,000 square feet, and will have total floor areas of 228,000 square feet. After deducting corridors, stairways, etc., and the space reserved for the power plant, there will be left a net rentable floor area of 160,000 square feet. These buildings will contain four passenger and six freight elevators. The

space for the power plant will be sufficient for the ultimate installation of steam boilers and engines and electric generators with a capacity of 1500 horse-power. At present, it is proposed to install three of the boilers, one 400-k. w. electric generator for power and one generator for lighting purposes, having a capacity of 2000 lights, and to retain the present engine, which is capable of the development of 1000 horse-power.

On the lot at the northwest corner of Exchange and Union Streets there will later be erected an office building for use in connection with the other buildings.

On the larger parcel, taking about four-fifths of the block bounded by Exchange, Union, North Foster and Cypress Streets, having an area of 60,748 square feet, there are now located buildings erected half a century ago, containing about 120,000 square feet of floor space, rented to nearly fifty tenants using about 300 horse-power. These tenants will not be disturbed until the completion of the buildings above described. It is expected that many of them will move into the new buildings, and that the present old buildings in this block will be replaced one section at a time until the entire block is improved, and that the power plant will be correspondingly increased when the new buildings are completed. These will cover a ground area of 50,000 square feet, having a total floor area of 300,000 square feet, with a net rentable floor area of 240,000 square feet. They will contain four passenger and five freight elevators. Running with the land on which the power plant is to be erected is a right to receive from the city of Worcester a daily supply of 200,000 gallons of water, sufficient for the requirements for the power plant after enlargement to supply future demands.

The city of Worcester is known as one of the very best manufacturing centres in the State. The growth in population has been steady for many years. The industries are greatly diversified, and the shipping facilities are unsurpassed. Three independent and competitive railroads enter the city, and connections are made by each road with over twenty different lines leading to other sections of the country. Shippers have all fast freight advantages to New York and Boston, and also the advantages of the cheaper but slower differential lines. The Merrifield properties have been for two generations the centre of thriving manufacturing industries, accommodating nearly fifty tenants, making a very great variety of products, which are shipped to all parts of the world. A general outline of the plan for the improvement of these properties was submitted to Mr. H. W. Goddard, president of the Board of Trade of Worcester, and president of the Spencer Wire Company, and he writes:

"I am very glad to see this effort to put this fine property, which has been a landmark in Worcester for two generations, on a permanent and modern basis, and you have my best wishes as well as that, I am sure, of the organization which I represent. Any assistance that I can render, or the Board of Trade, will be gladly given, and I hope you will feel free to ask for it. I believe more separate industries in this city have had their beginning in your buildings than in almost all of the rest of the city put together. I hope you can make satisfactory arrangements to include as much as possible of the adjoining properties as to make your plan and buildings as comprehensive as possible, and thereby improve all of the surroundings.

"With new buildings of modern construction, well lighted, electrically equipped, elevator service, and your unsurpassed location, you can not only retain your old tenants, but attract new ones.

"The city of Providence has a number of manufacturing buildings of the same class on the same lines as you propose, and I am informed that they are always rented and make a very satisfactory investment. They are certainly a great credit to the city, just as, I am sure, yours would be."

THE EMPLOYMENTS OF OUR SCHOOL CHILDREN.

The following paper was read before the Woman's Club, Wednesday, February 8th, by Miss Mary Trumbull, teacher in the English High School:

TO many of us who have been teachers for several years, the question how far the schools and their outside work should absorb the time and energies of the pupils is a vital question, and when the Social Service Committee of the Woman's Club was planning for its members' day, and trying to add its mite to the betterment of Worcester's condition, the subject was brought to its notice, and is presented to-day as worthy of your attention.

The writer does not, however, treat the subject from any wide knowledge of it, but presents the reflections of a school teacher on the data gleaned in the little corner with which she is familiar concerning the employments of school children.

In the school spoken of there were enrolled during the first ten weeks of this school year 840 pupils, of whom only 380 were boys. Of these 380 the records show that 172 were employed, for a greater or less length of time, outside of school hours, a total of 45.26 %. Of these, 29 were only occasional workers, and of the remaining 143 the aggregate time of employment per week was 2219 hours, 50 minutes, an average of 15 hours, 31 minutes per week for each pupil. The minimum time of employment was 20 minutes, the maximum 48 hours per week.

The time of day being an important factor, it is of interest to note that 5 work Sundays, 19 Saturdays (a half or more of the day), 23 evenings, 41 before 8.30 a.m., and 120 in the afternoon.

The occupations reported are of interest as showing the varied employments of our children, as well as the opportunities Worcester offers. The count gave 33, though another grouping might reduce the number. These are: work on farm, care of horses, driving team (grocery, laundry, etc.), baggage transfer, jobbing, choring, tending boiler, care of private grounds, janitor, work in markets and stores, in shops, factories and printing offices, running elevators, bill-posting, doing errands, delivery with automobile, work in laboratory assisting a teacher, employment in offices (doctor's, insurance, etc.), agent, reporter, extra work in a newspaper office (one pupil being thus employed from 6 p.m. to 1 a.m.), draughting, work in library, in the post office, ushering at theatre, and lastly, lighting lamps, delivering papers and peddling milk.

Not all this work was done for the public. In fact, many specified that they worked for their fathers, a few for their mothers, and many for others of the family of relationship more or less remote. Some, however, specified that though they worked for relatives, it was "for pay."

President Carroll D. Wright is quoted as saying that "figures won't lie, but liars will figure." Notwithstanding, please credit the writer with honesty of purpose, though perhaps with the prejudices of a school ma'am, in presenting these figures, and in an attempt at an interpretation of them, and a few suggestions as to effects on teachers, schools and pupils.

From the foregoing statistics it appears that of the pupils enrolled during the first ten weeks of the present school year, only 45.24 % were boys. Of these 45.26 % work from 20 minutes to 48 hours outside of school. Now consider the effect upon the relative standing of the boys and girls. Of course, it can be seen that if nearly half the boys have, at this early age, the burden of self-support, their standing in school must suffer in proportion as they cut down their study time out of school by outside work. Of the 144 hours of the six working days let us allow seven hours for sleep, one-half an hour for each meal, twenty-five hours

in the school room, and there remain only 68 hours. What standing can the boy of average ability maintain if, of these 68 hours, he spends 48 hours in outside employment? The average pupil has, in the high school, four recitation periods for which to prepare. One he may prepare for in school. We teachers assign lessons that require an average of 45 minutes' study for each subject. Therefore, the average pupil should, to do his share of the work, study 2¼ hours daily out of class time. Is it any wonder, then, that few boys reach the requisite standing to be assigned a place on the platform at the graduation exercises? One year only one boy had the requisite number of A's to fit him for this honor. The Bancroft scholarship is soon to be assigned. To whom shall it go? To the one who needs it most? He may be the one so heavily handicapped that he has not been able to so fit himself that he can make the best use of this coveted prize.

A second bad outcome of these conditions is on the attendance. Here is a boy who distributes morning papers. It snows, slow work getting around; or morning dark, boy did not wake up in time to finish his route before school time; or paper delayed to get the latest news of a bad fire, pupil is fifteen minutes late, and the first recitation is partly over before he can be admitted to class.

As in the matter of absences, a boy does work that takes fifteen hours a week, but it is occasional work to be done as his employer needs it. Suppose it is necessary to have this work done three forenoons of the week, what time remains for school?

Putting aside these occasional losses, which determined pupils will overcome, the tendency is to drop the burden of school and carry only that of work. Several were found on the list who did so early in the school year, and others have since done so. Do you wonder? Think of spending eight hours a day on mental labor, and then doing fifteen and one-half hours per week extra work. Could you keep up the pace?

But the ordinary individual says: "Well, it is best for them to leave if they can't keep up." Very well; but let us see what that means. Professor Conant, in his article in the February number of the Worcester Magazine, cites authorities to show the advantage of the educated over the uneducated man. Let me use them here to see what it means to leave the high school during the first year. He says:

"A boy with a common school education (that is, a graduate of the grade schools) has practically one chance in nine thousand of general recognition as a successful man in some department of human endeavor and usefulness.

"A boy who has devoted four additional years to his education, that is to say, a boy who has graduated from the high school, has practically one chance in four hundred and ten of obtaining similar recognition."

Now this means that the boy who leaves the high school early in the first year, as many of them do, has divided his chance by twenty-two. Who wishes to shoulder the responsibility of this step?

But the matter of outside work can be looked at from another point of view, and that is its effect on the physical well being of the boy.

Mrs. Alice Freeman Palmer once said in Boston to an assemblage of teachers that if we could have pupils who had had seven hours of sleep and three sufficient meals every day, we could work wonders with them. Now I do not imagine many of our pupils suffer from hunger, but I do know that many suffer from something worse, and that is lack of sufficient sleep at proper hours. Let me cite a few facts: No. 48 on list delivers papers from 5 to 7.30 a.m.; No. 127 does the same from 4 to 6 a.m.; No. 142 has a milk route of four hours before 8.30 a.m.; No. 148 has a paper route from 3.30 to 7 a.m.; No. 151 works four evenings a week from 7 to 12, and No. 102 works from 6 p.m. to 1 a.m. daily.

I once rebuked a junior boy for being abstracted and absent-minded in his fourth-hour recitation. I had done so before, but this time his temper (or mine) got the better of him, and he blazed out a remark of which I have forgotten the verbal setting, but the content of which was that he guessed if I got up at half-past two, and peddled papers till

six, I would be stupid, too, when eleven o'clock came.

Those of us who remember Talmage's remark that early risers are conceited in the morning and vapid in the afternoon, can sympathize with him. And I take it that Talmage meant somewhere about six for his early hour. But the worst display of temper I ever encountered on this subject was from a first year boy, whose work was absolutely worthless. He was rebuked in class for his poor work and inattention, when he returned this appalling answer that he rose at midnight and peddled milk till just time to get his breakfast and come to school, and if he could sleep in the afternoon, he was going to, whether he knew anything about algebra or not. I had nothing to say. I should have felt that way myself.

Did you notice the arrangement of occupations—that first were put the more primitive occupations of farming, care of horses, and teaming, and that the list ended with the more artificial occupations of our present civilization, special emphasis being put on lighting lamps and delivering papers and milk? The reason for the arrangement and emphasis was that of all the occupations of our school boys, despite those being carried on in the open air, I consider them, because of the hours necessary, the worst for our pupils in their effects on minds, bodies and dispositions. At present, 38 of our 173 boys are so employed—2 tending street lamps, 6 on morning milk routes, and 30 on morning paper routes.

Thus far our attention has been given to the boys because we have statistics for only six of the girls. Of these six the maximum is 30 hours' employment per week, and the minimum 2 hours. The average is 14 hours, 40 minutes of work weekly out of school hours. The occupations are housework, extra work in stores, and giving music lessons.

These are our present workers. In the past we have had those who did, in addition to their school duties, work for whole families, including washing. And we have borne the burden with them by our sympathy, and have shouldered one of our own when they came to our classes with depleted vitality and flagging interest.

No such work in the organization of our school system has been done for the United States as has been done for Germany. We teachers do not even pretend we are doing the best things nor in the best way, but we do hold that the schools are the best device yet invented for training the youth of our land. You parents are passing over into our hands more and more these most precious of your possessions. Everywhere, and at all times (except, occasionally, when it is a question of money to be invested), it is claimed that the schools are the bulwarks of the nation. Is it best that the strength of these bulwarks should be weakened, even in the measure shown, by occupations that take time and strength needed on the work of the schools?

Last fall Professor Fischer of the Royal Technical High School of Munich visited our school on his return from St. Louis, to examine our science equipment. During his stay in the building he asked our principal, "Have you any pupils that do any work?" When it was found that he meant labor outside of and unconnected with school work, and he had been assured that we had, Professor Fischer said, "Ah! that should not be. In Germany it would not be allowed. The boy would be obliged to do one thing or the other, to drop school or the work. It is a blot on your school system."

I ask you if this is so, and if it is, what can be done to mend matters?

HON. CHAUNCEY M. DEPEW'S EULOGY ON SENATOR HOAR.

Upon the death of Senator George Frisbie Hoar the assertion was made that death removed the last of the great statesmen and that the United States Senate had seen its best days.

At the memorial services in the United States Senate, Saturday, January 28, Senator Chauncey M. Depew of New York State took this statement for the theme of his address. There were sixteen addresses at the memorial, the first being by Hon. Henry Cabot Lodge of Massachusetts, and the last by Hon. Winthrop Murray Crane of Massachusetts. Senator Depew's address has been much commented upon, and is as follows:

MR. President: It is asserted by many writers that the Senate has seen its best days. They claim that the statesmen who made this body famous in the earlier periods of our history have not had any successors of equal merit or genius. The Senate does not change, but the questions which it must discuss and decide are new with each generation. There is a broad distinction between the elucidation and solving of problems which relate to the foundations and upbuilding of institutions, which are vital to their preservation and perpetuity, and the materialistic issues of finance, commercialism, and industrialism. The one arouses in the orator every faculty of his mind, every possibility of his imagination, every aspiration of his soul, and every emotion of his heart, while the others demand mainly the aptitude and experience of the college professor or the expert or student on subjects which affect the fortunes of the factory, the mill, the furnace, and the firm.

Webster could command the attention of listening senates and of an anxious and expectant country with orations which have become part of our best literature, and educate the youth of our schools on interpretations of the Constitution of the United States upon which depends the life or death of liberty. But Webster could hold only temporary interest and a narrow audience on tariff schedules upon wool or lumber, upon iron or cotton fabrics, or upon bimetallism or the single standard. Hamilton and Jefferson and their antagonistic schools were creating with little precedent to guide them a form of government in which liberty and law would give the largest protection to the individual citizen, and maintain order and promote the greatest happiness of the mass. The one believed these results could best be obtained by centralized power, the other by its distribution among the States. There was then brought into play the loftiest creative and constructive genius which the world has known.

Webster, Clay and Calhoun, the Senatorial triumvirate, who attained the zenith of Senatorial fame, made their reputations and that of this body upon the discussion of implied powers in the Constitution, affecting not only the nation's life, but the destruction or perpetuity of human slavery. Webster, in that immortal speech which educated millions of our youth to rush to arms when the republic was in danger, preached from the text of "Liberty and union, now and forever, one and inseparable." Calhoun saw clearly the extinction of slavery with the growth of the country, and brought to the defense of the system resources, intellectual and logical, never equaled; while Clay postponed the inevitable through compromises which were adopted because of his passionate pleas of marvelous eloquence for peace and unity. So in the acute stage of the controversy which resulted in the Civil War and ended in the enfranchisement of the slaves, Seward here and Lincoln on the platform were appealing to that higher law of conscience which uplifts the orator and audience to a spiritual contemplation of things material.

Happily the work of the founders in one age and the saviours in another has left to us mainly the development, upon industrial lines, of our country's resources and capabilities. We produced no heroes in over half a century, and yet

when the war drums called the nation to arms, Grant, from the tannery, and Lee, from a humble position in the army, rose to rank among the great captains of all the ages. Had the Civil War never occurred, Grant would have lived a peaceful and modest mercantile life in a country town of Illinois, and Lee would have passed the evening of his days in equal obscurity upon the retired list of the United States Army. Better, if the contest can be honorably averted, that a hero should never be known than that his discovery should be brought about by the calamities of war, the sacrifice of hundreds of thousands of lives, and the distress, demoralization, and devastation of civil strife.

We pay our tribute to-day to one who, in any of these great periods, would have stood beside the most famous; to one who, having the experience of a longer continuous term in Congress than any other citizen ever enjoyed, testified on all occasions to the increasing power, growth and beneficent influence of this body, and to the ever advancing purity of American public life. His education and opportunities, his singularly intimate connection with the glorious past and the activities of the present, made him a unique and, in a measure, an isolated figure. He was educated under conditions and in surroundings which developed for the public service conscience, heart, and imagination. A lawyer of the first rank by heredity, study and practice, he nevertheless approached public questions, not from the standpoint of the pleader, but the orator; not as an advocate with a brief, but as a patriot with a mission. He cast his first vote in 1847, when all the fire of his youth had been aroused by the slavery agitation. He came actively into politics the year after, when the Democratic party had divided into the Free Soil and slavery men, and the Whig party was split between the adherents of conscience or cotton. He began his career upon the platform, and his preparation for the public service as a conscience Whig.

He saw the preparation, through the American or Know-nothing party, in which Whigs and Democrats were acting together, of an organization upon broader lines. No one worked harder or more intelligently for the fusion of men of opposite creeds on industrial questions, but of one mind in opposition to slavery, into a national constitutional anti-slavery party. When that party came into existence in 1856 with a presidential candidate and platform, it had no more ardent sponsor for its faith and its future than Senator Hoar. A party whose fundamental creed was liberty for all men of every race and color appealed to the poetic and sentimental side of our friend, and to the revolutionary ideas with which he was saturated. He came to believe that the worst which the Republican party might do would be more beneficial to the country than the best which its opponent was capable of. Though often differing from his party associates, his combat was to accomplish his purposes within the lines. He bowed to the will of the majority in his action, without surrendering his individual convictions as to the wisdom of the policy. He claimed, and with much reason, that the party had come after repeated trials, in many instances, to his way of thinking, and if those who went outside of the breastworks and lost all influence had remained with him, his ideas would sooner have been adopted. We have here the explanation of the only criticism which has ever been passed upon his public acts. As in the Hawaiian and Panama questions, where his eloquence gave comfort to the opposition and grieved his friends, his votes supported the position of the majority and the policies of the administration.

It was a high privilege to be a member of the Judiciary Committee of the Senate under his chairmanship. It was a court presided over by a great lawyer. With courteous deference to the members, bills were sent to sub-committees, but when the sub-committee made its report, it found that the questions had been exhaustively examined before by the chairman. The sub-committee, which had perfunctorily done its work, received in the form of a polite statement and exposition of the case the report which, if they had attended to their duties, they ought to have made. This work required not only vast legal knowl-

edge and accurate judgment, but prodigious industry. It was that rare condition of mind where work becomes a habit, and with Senator Hoar, when the committee or the Senate or law or literature failed to give him occupation, he would pass the idle hours in translating Thucydides or some other Greek author into English.

In the examination at the close of the last session, before the Committee on Privileges and Elections, of the president and apostles of the Mormon church, himself a close student of all theologies and an eminent Unitarian, he was aroused by the claim of divine inspiration for the words and acts of the Mormon apostles. He drew from President Smith the statement that the action of his predecessor, President Woodruff, in reversing the doctrine of polygamy, heretofore held by the church, was directly inspired by God, and then made him testify that though living under the inspiration of the presidency of the church, he was also living in direct violation of that revelation by remaining a polygamist. In the course of a long cross-examination he drew from Apostle Lyman statements of doctrine and beliefs, and subsequently contradictions of these positions, and then forced the apostle to swear that both the assertion and the contradiction were inspired by God.

At the age of forty-three he was at the cross-roads of his career. He had reached a position at the bar which placed within his grasp the highest rewards of the profession of the law. The country was entering upon an era of speculation, of railroad building, the bankruptcy and reorganization of combinations of capital in the creation and consolidation of corporations, which called for the highest talents and the best equipment of lawyers. Questions as to the power of the general government over corporations created by states, and the powers of the states as to limitations and confiscations of corporations engaged in interstate commerce, interested capital and labor, shippers and investors. The largest fees and fortunes ever known in the history of the practice of the law came to those who demonstrated their ability during these wonderful years. On the threshold of this temple of fortune and fame at the bar Mr. Hoar was elected to the United States Senate. The courts lost a great lawyer, the Senate gained a great statesman, and he lived and died a poor man.

I spent a memorable night with Mr. Gladstone when in a reminiscent mood, and with a masterful discrimination and eloquence he conversed upon the traditions of the House of Commons during the sixty years of his membership. As the stately procession of historic men and measures came into view, they were inspired by the speaker with all the characteristics and methods of their period. The changes which had occurred were detailed by a master who loved and revered the Commons. Senator Hoar would do this for the thirty-seven years of his activities in Congress, but with a wit and humor which Gladstone lacked. He remembered the sarcasm, or the ridicule, or the epigram, or the witticism, or the illustration which had not only illumined but ended the debate, and the opposing debater.

We read with wonder of the nights when Samuel Johnson gathered about him Goldsmith and Burke and Reynolds and Garrick; and Boswell could make immortal volumes of their conversations, especially at this time when conversation is becoming a lost art, because the shop has invaded the drawing-room and the dinner table, and cards have captured society.

But Senator Hoar knew his favorites among the Greek and Roman classics, and the Bible and Shakespeare by heart. He could quote with a familiarity of frequent reading and retentive memory from the literature of the period of Queen Elizabeth and of Queen Anne, as well as the best of modern authors, and he was a member of that coterie which met weekly at Parker's in Boston, where Longfellow, Hawthorne, Whittier and others reproduced for our day, and in better form, the traditions of the Johnsonian Parliament, and where the Senator and his brother were the quickest and the wittiest of the crowd.

Whether in conversation or debate, there never has been in the American

Congress a man so richly cultured and with all his culture so completely at command.

The statesmen of the Revolution were with Senator Hoar living realities. The men of the present were passing figures, fading into obscurity, compared with these immortals. In a remarkable speech he said of the signers of the Declaration: "We, not they, are the shadows." On his father's side, his grandfather, two great grandfathers, and three uncles were in Lincoln's company at Concord bridge, and his mother was a daughter of Roger Sherman, whom he thought the wisest and ablest of the members of the Continental Congress. He was the only person who signed all four of the great state papers to which the signatures of the delegates of the different colonies were attached: the Association of 1774, the Articles of Confederation, the Declaration of Independence, and the Constitution of the United States.

His mother remembered, as a little girl, sitting on Washington's knee and hearing him talk, and her sister, the mother of William M. Evarts, when a child of eleven, opened the door for General Washington as he was leaving the house after his visit to her father, Roger Sherman. The General, with his stately courtesy, "put his hand on her head, and said, 'My little lady, I wish you a better office.' She dropped a courtesy and answered, quick as lightning, 'Yes, sir; to let you in.'" He lived all his life in this atmosphere of his youth. The marvelous results of the working of the principles of the charter framed in the cabin of the Mayflower for "just and equal laws," and of the Declaration of Independence in the development of orderly liberty for his countrymen, convinced him that the same rights and privileges would end as happily, after trial, with the negroes of the South and the people of the Philippine Islands and of the Russian Empire. It was a matter with him not of pride or boastfulness, but of sustaining power under responsibilities that in every Congress from the beginning had been a representative of the Sherman clan. I was distantly related to him by the same tie, and he exhibited an elder brotherly and almost fatherly watchfulness and care for me when I entered the Senate.

His cousins, William M. Evarts and Roger Minot Sherman, were the foremost advocates of their periods, his father eminent at the bar, and his brother Attorney-general of the United States, and yet he would have been the equal of either as a lawyer if he had climbed for its leadership. It has been the high privilege of his colleagues here to meet, converse, work, and debate with a Mayflower Puritan, possessed of all the culture and learning of the twentieth century, but with the virtues, the prejudices, the likes and dislikes, the vigor and courage of the Pilgrim Fathers, neither softened nor weakened by the looseness of creeds nor the luxury of living of to-day. As our friend the Senator from Massachusetts (Mr. Lodge) said in his most discriminating and eloquent eulogy—the best, I think, I have ever heard as a tribute of an associate and friend—Senator Hoar would have died like a martyr for his principles. In 1850 he delivered a speech in Mechanics Hall at Worcester upon the evils of slavery and the crime of its extension into the territories, which attracted general attention and was widely published. Fifty-four years afterwards he was again before an audience in Mechanics Hall, composed of the children and grandchildren of the first.

The dread summons had then come to him, and he had but few days to live. The old warrior spoke with the fire of his early manhood, but his message to his neighbors and countrymen after a half century was not of war, as before, but of peace, love, and triumph. The progress and development of the republic during these fifty years of liberty was his theme. He looked joyously upon the past and present, and was full of hope and confidence for the future. He had finished his work and performed a great part in great events of great moment for his country and humanity, and he left to his contemporaries and posterity the brilliant example of a life nobly lived.

WORCESTER BOARD OF TRADE.

BANK BUILDING, 11 FOSTER STREET.

OPEN 7.30 A.M. TO 5 P.M. PRESIDENT'S HOURS: 1 TO 2 P.M. MONDAYS, TUESDAYS, WEDNESDAYS AND FRIDAYS.

PRESIDENT, HARRY W. GODDARD. VICE-PRESIDENT, PAUL B. MORGAN.
TREASURER, H. WARD BATES. SECRETARY, HERBERT M. SAWYER.

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At the February meeting of the directors of the Board of Trade, the bonded warehouse proposition was given another strong push, the directors unanimously accepting a report from the Committee on Mercantile Affairs, that necessary steps be taken to secure for Worcester such warehouses. At the meeting of the Mercantile Committee, Mr. Irving Swan Brown made several suggestions and Mr. Otis E. Putnam presided. Mr. Alfred Thomas explained the advantages of a warehouse. A petition will be circulated from the Board among importers and merchants for the establishment of the warehouse.

Custom receipts at Worcester port of entry continue in record-breaking figures, the increase for the last seven months being fully $100,000 larger than a year ago, when $73,000 was collected, and the outlook is that the month's receipts will be almost double those of February, 1904.

With adequate facilities for warehousing imports, the business of the port could be doubled, says Capt. Charles H. Pinkham, deputy collector, who took charge of the department in November, whereas most of the large consignments of wool and other raw materials are stored at Boston.

"Worcester will have a warehouse some day," Capt. Pinkham said, "and whoever takes it up will get good returns from the investment. Of course, an official storekeeper will be necessary, but there is no reason why the receipts will not be many times his salary."

Relative to the bill now before Congress to regulate interstate commerce, known as the Each-Townsend Bill, a resolution was adopted, it being suggested by Mr. J. Russel Marble, and copies have been sent to the Massachusetts Congressional delegation. It is:

"Whereas, Theodore Roosevelt, president of the United States, has called the attention of Congress by message to the necessity of some reasonable legislation which shall give the interstate commerce commission power over rates and rules of interstate transportation, and has also called the attention of the people in general to it in a public address; and,

"Whereas, the correct settlement of this question is a vital one to the business interests of this country:

"Resolved, that the Worcester Board of Trade urge upon the members of Congress from Massachusetts, both in the House and Senate, the speedy passage of such legislation as is called for by the President's message.

"Resolved, that a copy of these resolutions be sent to the Massachusetts members of Congress, both of the House and Senate; and,

"Resolved, that the delegates from the Worcester Board of Trade to the Massachusetts State Board of Trade urge on the latter body the speedy passage of similar resolutions."

Mr. Harlan Page Duncan, for more than fifty years engaged in retail trade in Worcester, died Feb. 2, at his home on Oxford Street, from congestion of the brain. Mr. Duncan was a pioneer hardware dealer, and of the men in business to-day, Mr. Otis E. Putnam, of the Barnard, Sumner & Putnam Co., and D. H. Eames, of D. H. Eames & Co., were contempo-

rary with Mr. Duncan. He was 68 years old and came to Worcester from his native town, North Brookfield, in 1854, and entered the employ of Calvin Foster & Co., then in the hardware business upon the location of the present Duncan-Goodell Co. store. He had been located at the same corner ever since, and only last year celebrated his fiftieth anniversary of his entrance into Worcester business life.

Mr. Duncan was married a few years after coming to Worcester, to Anna H. Strong of Worcester. Two children were born to them, Frank Edgar Duncan, now living at home, and Charles Henry Duncan, who died in infancy. Mr. Duncan leaves two sisters, Emma Frances, wife of Hon. Theodore C. Bates of Worcester, and Ellen Tryphosa, wife of Dr. Albert G. Sprague of Providence.

He was a member of Quinsigamond Lodge, A. F. and A. M., and several years was the treasurer of the lodge. He was also a member of the Commonwealth Club and the Board of Trade.

When he entered the employ of Calvin Foster & Co., that firm consisted of Calvin Foster and Augustus Whitman. The following winter David Whitcomb, father of G. Henry Whitcomb, was admitted to partnership and the business went on in that way until 1866, when Mr. Duncan and John B. Goodell, then a bookkeeper in the firm's employ, bought out the Whitcomb interest.

In 1881 the firm name of Duncan & Goodell was adopted, and it remained under that title until 1887, when the firm was incorporated under Massachusetts laws as the Duncan-Goodell Co. It was the first of all the mercantile concerns in Massachusetts to be incorporated.

At the funeral, which was conducted by Rev. Andrew Burns Chalmers of Plymouth Church, the Board of Trade was represented by Mr. W. W. Johnson of the Ware Pratt Co.

Mr. John Rivard, member of Worcester Board of Trade for several years and prominent in South Worcester business circles, died at his home, 93 Lamartine Street, Jan. 26, after a short sickness from pneumonia. His age was 44 years. He was born in St. Simon, Canada, in 1861, and came to the United States when a boy. He lived for a few years in Upton and came to Worcester in 1882. He went into the provision business on Lamartine Street, which was the beginning of his financial success. He built up the largest provision business in that section of the city.

The business was started in the Cadoret block at Lamartine and Lunelle streets, and about 1893 Mr. Rivard moved it across the street into a building containing two stores and six tenements.

As soon as his new store was in order, Rivard added a wholesale hay and grain department, and the whole business progressed so rapidly that now his estate comprises forty-two tenements, mostly in the Island district, but including some on the west side.

Mr. Rivard was elected a member of the Common Council from Ward 5 in 1896, and served two full terms, from then until 1900.

During these two terms, Mr. Rivard served on some of the most important committees in the City Council, notably Finance and Water.

Mr. Rivard was a member of the Wards 4 and 5 Naturalization Club since its organization; when the Frontenac Club was in existence, he was its Vice-president, and one of the directors who bought the land for the building of the club-house at the Lake.

Mr. George N. Morse, prominent in Worcester for many years as a teacher of piano music, and conductor of the Board of Trade Glee Club since its organization, died Feb. 22, at the home of Mr. Frank H. Beals, from malignant scarlet fever and pneumonia. Mr. Morse was forty-two years old, and for twenty years has been a resident of Worcester, his life work being devoted to music. He was an exceptionally brilliant young man and contributed a great deal to the music life of Worcester. As a conductor he obtained splendid results, and as a composer, "The Pillar of Fire," recently given in Mechanics Hall by the Board of Trade Glee Club, was his most pretentious effort and was an unqualified success.

He had a wide circle of friends, and his death, widely regretted, leaves a vacancy in the music ranks that will be difficult to fill. The Glee Club he formed attained a reputation of which it may be proud. Although not a member of the Board of Trade, his connection with the Glee Club brought him in close touch with the organization in which he was highly respected.

The following is an abstract from the annual report of Worcester Board of Health for 1904, showing the low death rate:

Population, water census, 1904, 128,286; death rate per 1000, stillborn excluded, 15.52; death rate per 1000, stillborn and premature births excluded, 14.98; death rate per 1000, stillborn and deaths at State Insane Hospital excluded, 14.14.

WORCESTER BUSINESS DIRECTORY.

MANUFACTURERS AND DEALERS.

AGRICULTURAL IMPLEMENTS.

Worcester Kemp Manure Spreader, Buckeye Mower, Bullard Hay Tedder, Worcester Rake. RICHARDSON MANUFACTURING CO., 84 Prescott Street, Worcester.

ARCHITECTS.

Albert A. Barker, formerly Barker & Nourse, Architect and Solicitor of Patents, 425 Main Street.

George H. Clemence, Architect, Walker Building, Room 205, 405 Main Street, Worcester, Mass.

Stephen C. Earle, Architect, Room 45, Burnside Building, 339 Main Street, Worcester, Mass.

Fuller & Delano Company, Architects, 452 Main St., Worcester, Mass. Ward P. Delano, Robt. L. Fuller.

Clellan Waldo Fisher, Architect. Office, 718 State Mutual Building, Worcester.

Edward Fitzgerald, Architect, Room 705, State Mutual Building, 340 Main Street, Worcester.

Frost, Briggs & Chamberlain, Architects, Offices, 518 Main Street, Knowles Building, Worcester, Mass.

Edward Topanelian, Architect, Room 705, State Mutual Building, 340 Main Street, Worcester.

George T. Tribe, Architect and Civil Engineer. Plans, specifications, expert estimates. 339 Main Street.

BANKS.

People's Savings Bank, 452 Main Street. See Advt.

Worcester National Bank, 9 Foster Street, See Advt.

Worcester Trust Co., 448 Main Street. See Advt.

Merchants National Bank, opposite City Hall, 452 Main Street. See Advt.

BELTING.

Oak tanned leather belting always in stock. GRATON & KNIGHT MFG. CO., Bloomingdale Road. See Advt.

Pure Oak Bark Tanned Leather Belting. Special Waterproof Belting, "B. & F." Belting, Dynamo Belts and other specials. Mill Supplies. J. F. & W. H. WARREN CO., 44 Vine Street, Worcester, Mass.

BLACKSMITHS.

Common Sense Shoeing Forge. JOHN J. GRADY, 162 Mechanic Street. Tel. 1028-6.

BOLTS AND NUTS.

Bolts, cold punched nuts and washers, die making and metal punching. THOMAS SMITH CO., Frank W. Foye, 14 Cypress Street.

BOOK BINDERY.

Art Work, magazines and periodicals. TOWNLEY'S, 311 Main Street. See Advt.

Book Binders and Paper Rulers. J. S. WESBY & SONS, 387 Main Street and 50 Foster Street.

BOWLING SUPPLIES.

Balls, pins, and improved foot chalks. M. A. BARTLETT, 29 Cypress Street.

BUILDERS' FINISH.

Cabinet, stair work, wood turning. THE CO-OPERATIVE BUILDERS' FINISH CO., 74-76-78 Central St.

Doors, sash, blinds, and fine builders' finish. HATCH & BARNES, 196 Union Street. See Advt.

BUILDING LOTS.

Choice Lots in vicinity Institute Park. STEPHEN SALISBURY, 9 Main Street. See Advt.

BUSINESS COLLEGES.

Bookkeepers, stenographers and typewriters. BECKER'S BUSINESS COLLEGE, 492 Main St. See Advt.

CAR BUILDERS.

Electric and steam cars. THE T. H. BUCKLEY CAR MANUFACTURING CO. See Advt.

CARD CLOTHING.

Machine Wire Heddles, also Twin Wire German Heddles. HOWARD BROS. MFG. CO., Vine St. See Advt.

CIVIL ENGINEERS.

Plans, water supply and sewerage. H. H. BROWNING, civil engineer, 405 Main Street.

Civil Engineer and Surveyor. O. WILLIS RUGG, Room 824 State Mutual Building. Telephone 787-3.

CONSTRUCTING ENGINEERS.

Builders of Morgan continuous gas producer. MORGAN CONSTRUCTION CO., Lincoln Street. See Advt.

CONTRACTORS AND BUILDERS.

Builders of public, commercial and manufacturing buildings and private residences. J. W. BISHOP CO., 107-109 Foster Street. Worcester, Boston, Providence, R. I.

Public and mercantile buildings a specialty. THE NORCROSS BROS CO. See Advt.

General Contractors for all classes of buildings. SCOVILLE & WHEELER, 518 Main Street, Worcester.

E. J. Cross, General Contractor. Estimates furnished on any class of buildings. Office, 82 Foster Street, Worcester.

CUT GLASS WORKS.

Rich Cut Glass. Factory and Salesroom, 17 Hermon Street. WILLIAM TAIT, Proprietor.

DECORATORS AND PAINTERS.

Artistic frescoing and decorating of churches, halls and residences, sign and house painting. SANDGREN & EHNBORG, 274 Main Street. Tel. 983-4.

ELECTRICAL ENGINEERS AND CONTRACTORS.

Electrical Supplies, construction Automatic Telephone Systems. PLUMMER, HAM & RICHARDSON, 619 Main Street.

ELECTROTYPERS.

Photo Engraving, Gold, Silver and Nickel Plating, any finish. A. B. BRUNELL, 15 Vine Street.

ELEVATORS.

Hydraulic plunger elevators. PLUNGER ELEVATOR CO., Barber's. See Advt.

EMERY WHEELS.

Grinding Wheels, grinding machinery and India oil stones. NORTON EMERY WHEEL CO. See Advt.

ENGRAVING.

Half-Tone Work done artistically. WOODBURY-CARLTON CO., 4 Walnut Street. See Advt.

ENGINE LATHES.

Drilling Machines and engine lathes. PRENTICE BROTHERS, Cambridge Street. See Advt.

ENVELOPE MANUFACTURERS.

All kinds and sizes of Envelopes, also Paper Boxes. SHERMAN ENVELOPE CO., Office and Factory, 75 School Street, Worcester.

FIREARMS.

Guns and pistols of all kinds. HARRINGTON & RICHARDSON ARMS CO., Park Avenue. See Advt.

WORCESTER BUSINESS DIRECTORY—Continued.

FIRE DEPARTMENT SUPPLIES.

Harness Snaps, fire extinguishers and model work. CHARLES ALLEN, 84 Foster Street.

FUNERAL DIRECTORS.

Geo. Sessions & Sons, 7 and 9 Trumbull Street. See Advt.

GASOLINE ENGINES.

The Only up-to-date portable gasoline engine on the market. E. O. KNIGHT, 86 Foster Street.

HARDWARE.

Wholesale and retail dealers in hardware and cutlery. DUNCAN & GOODELL CO., 404 Main Street. See Advt.

HOTEL.

Bay State House, European plan. C. W. RIPLEY, proprietor. See Advt.

IRON AND STEEL.

Supplies for blacksmiths, carriage-makers. GEO. F. BLAKE, JR., & CO. Office and storehouse Mechanic and Foster Streets. Tel. 2508-2509.

Pratt & Inman. Larger assortment of sizes, better quality of stock, more grades of steel, than anyone else in the United States. Complete stocks of Tool Steel, Refined, Screw, Swedish Irons. Blacksmiths' Supplies.

IRON FOUNDERS.

High Grade Machinery Castings. STANDARD FOUNDRY CO., Tainter Street. See Advt.

INSURANCE.

General insurance agency. CHARLES E. GRANT, Rooms 711 and 712 State Mutual Building.

Insurance of all kinds. TATMAN & PARK, 410 Main Street. See Advt.

Life Policies. STATE MUTUAL LIFE ASSURANCE CO. See Advt.

MACHINE SCREWS.

Machine Screws in iron, steel and brass. WORCESTER MACHINE SCREW CO., Beacon Street. See Advt.

MACHINISTS' TOOLS.

Lathes, Punches and Shears. W. C. YOUNG, 17 Hermon Street.

MECHANICAL ENGINEERS.

Mill Buildings, power installations, water supply and sewerage. THOMPSON & GALLAGHER, 339 Main St.

METAL SPECIALTIES.

Stove Trimmings, steampipe collars and ferrules. MATTHEWS MFG. CO., 104 Gold Street. See Advt.

MILL SUPPLIES.

Crawford & Co., 17 Mechanic Street. Everything in Mill Supplies, Wool Stock, Cotton and Cotton Waste.

PAINTS AND OILS.

Painters' Supplies and Lubricating Oils. F. M. HEATH & CO., 40 Southbridge St., opp. Post Office.

PATTERN-MAKERS.

Pattern-making for all kinds of machinery, variety wood turning. J. W. ARMOUR, 164 Union Street.

PRINTING.

Good Printing quickly executed. F. S. BLANCHARD & Co., 34 Front Street. See Advt.

Printing and Engraving, HURLEY'S PRINTERY, 38 and 44 Front Street.

Posters, Show Cards, Theatrical and Commercial Printing. C. R. STOBBS, 16 Mechanic Street.

Commercial Printing and Blank-book Work. O. B. WOOD, 50 Foster Street. See Advt.

RAILROADS.

Boston & Albany division of N. Y. C. & H. R. R. See Advt.

ROOMS WITH POWER.

Rooms with power in business district. ESTATE OF WM. T. MERRIFIELD, 100 Exchange St. See Advt.

ROOFERS.

Metal Ceilings, cornices, skylights, ventilators. NEW ENGLAND STEEL ROOFING CO., 274 Main Street.

SHOE MANUFACTURERS.

Heywood, the Worcester made Shoe. HEYWOOD BOOT & SHOE CO., Retail Store 415 Main Street. See Advt.

STEAM ENGINES AND PUMPS.

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THE WORCESTER MAGAZINE

Vol. VIII. APRIL--1905 No. 4.

Magazine and Municipal Comment.

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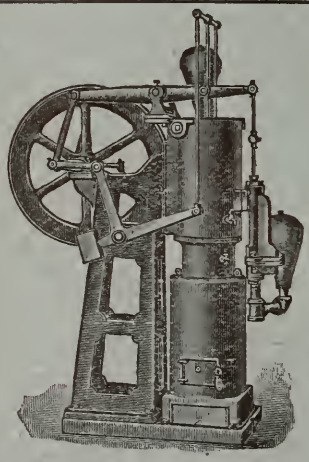

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LATEST PLAN FOR UNION STATION.

The Worcester Magazine.

Vol. VIII. APRIL, 1905. No. 4.

This magazine is published by the Worcester Board of Trade. Its reading pages are devoted solely to municipal development, good citizenship and the business welfare of Worcester. Space in these pages is not for sale.

MAGAZINE AND MUNICIPAL COMMENT.

William Howard Taft.

The Board of Trade, at its annual banquet April 1, has as its guest Hon. William H. Taft, secretary of war. An American jurist and administrator, son of Alphonso Taft, born in Cincinnati in 1857, he graduated at Yale College in 1878 and at the Law School of Cincinnati College two years later. In 1881-2 he was prosecutor of Hamilton County, and later for a time was a collector of internal revenue. From 1887 to 1891 he was judge of the Superior Court of Ohio; was Solicitor-general of the United States in 1890-92, and was a Judge of the United States Circuit Court (sixth district) from 1892 to 1900, when, at the request of President McKinley, he resigned to become chairman of the commission appointed to establish civil government in the Philippines. The following year, on June 5, he was appointed the first civil governor of the Islands. In 1903 Governor Taft resigned this position to accept the appointment of Secretary of War as successor of Elihu Root.

The Insurance Report.

During the past summer a representation of the Committee of Twenty of the National Board of Fire Underwriters visited Worcester. The ground was gone over carefully to see where the weak points were from a fire-fighting standpoint. Of course this committee is looking after the interests of the insurance companies, and naturally finds many faults. The report contains many recommendations, but compared with other cities Worcester comes in for little criticism. The recommendations are: increasing the low service water system by substituting distributing reservoirs of higher elevation and reorganization of the system; the development of the Asnebumskit water shed; strengthening the high service system; that the supervision of the Fire Department be in the hands of a commission; the formation of additional fire districts; additional men for companies; for two first-class-size engines; for a station in the vicinity of Newton Square; for a water tower company; better requirements for fire protection in the construction of buildings; for an inspector of petroleum as a subordinate officer of the License Board.

Mr. Irving E. Comins, ex-President of the Worcester Board of Trade, and ex-President of the Common Council, has contributed an article for the Magazine, inspired by the report of the Committee of Twenty. There is no man in Worcester who has made more of a study of fire department needs and fire fighting fires, than Mr. Comins. He does not dissect the report at any great length,

but shows the real needs of the Worcester department, and proves his statement by the facts shown in fighting the recent fire in the Crompton block on Mechanic Street. His figures and statements are made after careful investigation and are worth reading carefully and considering well.

East Side Wants.

The tax payers on the east side of the city have formed an organization for their mutual interests. It is claimed that this section of the city does not get proper representation from the city legislators, and in this respect they are to a certain degree right. A committee has been appointed to select a list of officers and effect permanent organization.

At the preliminary meeting Dr. D. W. Abercrombie, principal of Worcester Academy, urged for united action for better things. He said the city lacked municipal organization in that unity of compactness of city life that is represented in Springfield and Providence.

He said Worcester has had an unusual growth, and it has been the prosperity of our manufacturing interests and the wide diversity of our manufacturing interests that have brought skilled workmen, mechanics, to our midst, ready for work. Suppose the city could be brought to construct a crosstown thoroughfare of ample width not a boulevard, how great such a convenience would be to us.

He argued for a high school on the east side of the city, better development of property around Lake Quinsigamond, and better streets. There was much enthusiasm at the first meeting, and work for the betterment of conditions is promised.

Housing Worcesters' Poor.

There is no place where local conditions are so thoroughly aired as in the Woman's Club. Under the direction of sub-committees various phases of civic life are considered and discussed. At a recent meeting of the club a paper was read on "Housing Conditions in Worcester," by Miss Miriam F. Witherspoon, general secretary of the Associated Charities. There is no person in Worcester who devotes so much time among the dwellings of the poor as she, or knows better the conditions of the people found in these abiding places. For ten years her work has been among the people of this class, and as it is only natural she knows whereof she speaks.

In the present number of the Magazine Miss Witherspoon's paper is given in full, and will bear careful reading. She quotes President Roosevelt, who says: "Every wretched tenement that a city allows to exist revenges itself on that city by being a hotbed of disease and pauperism."

There are no real slums in Worcester under unwholesome and degrading conditions. There are few dark hallways or dark bedrooms in the city in comparison with other cities, and the crowded conditions in other cities do not obtain here. The basis of the paper is made upon fifty tenements visited in the so-called poorer sections of the city. It is found there are on an average two and a half families to a dwelling. It is found there are too many dark basement tenements, but the one vital need demanded in tenement construction is sanitary plumbing. In many instances of shiftlessness the fault is jointly with the landlord and tenant. The average rental paid by these fifty families is $7.59 a month.

In summing up her paper Miss Witherspoon says there is a demand for three and four room tenements which can be rented for $10 a month.

Finish of Smoke Talks.

The winter series of smoke talks under the direction of the Committee on Meeting and Reception of Worcester Board of Trade, is completed. The series taken as a whole was one of the most enjoyable and instructive ever given, and were exceptionally well attended.

The first was given in December by Mr. Toshi Yosu Kuma of Clark University, on the war between Russia and Japan. It consisted of a brief review of the war, and he gave predictions covering the spring campaign which have

come true. He showed a thorough knowledge of the situation.

The second talk was by Mr. Frederick A. Huntress, general manager of the Worcester Consolidated Street Railway Co., on the development of electric railways. It was illustrated, the early systems being explained and the growth and development of the electric system was outlined in a most graphic and interesting manner.

Mr. J. Randolph Coolidge, Jr., of Boston, in February told the Board of Trade members how the Worcester buildings could be made far more attractive by interior decoration, showing some of the serious defects in this line by a number of lantern slides of Worcester's public buildings, principally the Court House and City Hall. As an illustration of a building harmonious in design, construction and decoration, he exhibited slides of the State Mutual building. As a means of interior decoration for City Hall, Mr. Coolidge outlined a feasible plan for the expenditure of $50,000 to cover a period of ten years at small cost to the tax payer.

The last talk was by Prof. Arthur W. French of Worcester Polytechnic Institute, on "Skyscrapers, or High Building Construction." Lantern slides were used to illustrate the lecture and the large attendance showed a decided interest in the talk. Prof. French has a practical as well as a theoretical knowledge of the high building proposition, having been connected with the construction of several of the highest in the country.

Each smoke talk had an educating influence, and the object of the Board of Trade in a social way to interest and instruct its members on these important subjects has certainly borne fruit during the winter months.

Nursing Its Industries.

The last number of the Manufacturers' Record, published in Baltimore, makes special comment on the proposition to rebuild the Merrifield building as an industrial centre. It says:

"Some weeks ago the Manufacturers' Record mentioned Dallas as one of several Southern cities considering propositions for the attraction of new industries. A dispatch from Dallas now announces that the Commercial Club of that city has taken steps for the formation of a corporation with a capital of $100,000 to insure the location of factories there by taking a part of the stock of substantial enterprises. This is a move in strict accord with the conviction that in the matter of manufacturing advance, Providence helps cities that are inclined to help themselves, a conviction belonging to old cities as well as to those which are comparatively young in industry. In that respect Worcester, Mass., is a striking illustration. More than fifty years ago William T. Merrifield conceived the idea of erecting a large building, equipping its rooms with power from a common centre and renting them to mechanics without sufficient capital to start a separate establishment, but yet moved by a purpose and ability to take advantage of just such an opportunity to start an industry. His experiment was eminently successful, and he was compelled to enlarge the borders of his building several times before they were burned in 1854. The story of that notable enterprise is told in the current issue of the Worcester Magazine dealing with a plan for an expansion of the idea in modern buildings well lighted and electrically equipped. It says that this plan is considered the most practical proposition for the business growth and expansion of Worcester. It recalls the fact that of the 1100 varied manufacturing plants of Worcester, many of them were rocked in what is locally called 'the cradle of industry' established by Merrifield. And it argues that if the plan was a success fifty years ago, when Worcester had a population of less than 25,000, it is fair to believe that with a present population of more than 130,000 it would be an absolutely guaranteed success, especially when modern ideas of power transmission are considered. Providence, R. I.; Philadelphia, Pa., and other cities have just such industrial nurseries, and their successful experience should be an inspiration for Southern cities which have yet to make their real industrial history."

Municipal Insurance Funds.

The lower branch of the Legislature has passed a bill authorizing cities and towns to establish municipal building insurance funds. The bill leaves to each city and town the acceptance of the provision under the prescribed limitations, which are that money for the designated purpose may be raised, not exceeding in amount in any year one-twentieth of one per cent. of the assessed valuation, and taxation for this object shall cease when such fund exceeds or equals one per cent. of such valuation.

An examination of the policy of various towns and cities with respect to the insurance of their public buildings shows little uniformity of practice. About half the cities of the Commonwealth insure their property, but among those that do not are Boston, Springfield, Cambridge and Fall River. Worcester carries a partial insurance. The policy which it is sought to definitely legalize by this bill is already applied in Haverhill and one or two other places, and no legal issue seems to have been raised as to their right to do this; but it has been thought better that all doubts on this point should be settled by permissive legislation. The large towns insure more generally than the cities, though the largest and richest of them all, Brookline, follows the lead of Boston in taking chances.

Worcester, until the first year of Mayor Rufus B. Dodge's administration, carried insurance on City Hall and several other prominent public buildings. At the expiration of the policies there was considerable agitation relative to reinsurance, but the policy appeared to be to take the risk.

Undoubtedly were this legislative authority given, more cities and towns would be disposed to make provisions for protection against fire losses than is now the case. Some time ago a committee was appointed in the city of Springfield to investigate and report as to the desirability of establishing such a fund. Since then its City Hall has burned without insurance.

For Trade Schools

The proposition of trade schools is a practical one and has been given special prominence by Gov. W. L. Douglas in his inaugural message. The labor unions have not been friendly to a continuance of the old apprentice system, but were they ever so much so, that system is no longer adapted to industrial conditions. The extent to which specialization has been carried in all the trades forbids this. Every trade is now broken up into many branches. The old saying that "nine tailors make a man" can now be reversed. It takes nine men or more to be a shoemaker, a carpenter, a mason or a blacksmith, provided they obtain their equipment through the regular line of service. The shop, the bench and the forge are no longer places for instruction except to those who have already mastered the general principles involved and come to them as the medical student comes to the hospital for the finishing touches which practical experience alone can give.

A more general and elaborate system of industrial education would broaden and strengthen the foundations for native skilled labor. It would afford incentive to the artisan in all branches of industry, and it would give him a basis of development upon which he could look forward to something better than simply to be the lord of a single machine all his days. There is an eager demand among the trade workers for such help as this would give them. The extent to which purely philanthropic institutions of this character are patronized is proof of this. In every city where a mechanic arts high school is maintained, the demands upon it are much greater than upon those of a purely academic character. It is educated industry that counts in this State more than in any other.

THE INSURANCE REPORT.

THE recent report by the "Committee of Twenty" of the National Board of Fire Underwriters has made known, in a public and official way, some of the weak points of our fire protective system that the Chief of the Department and others who are interested in such matters have long been aware of. It is not the purpose of this article to criticise this report in detail, but rather to explain more clearly some of the recommendations and show why they were merited. In the first place: What is the "Committee of Twenty," and what called it into existence? The committee is composed of twenty engineers, each an expert in some particular work connected with the branches of engineering made use of in the construction of buildings, water works, and in the preventing and putting out of fires. They are employed by one hundred and twenty of the largest fire insurance companies, to carefully and minutely inspect and report upon the actual conditions existing in the different cities, and to recommend such improvements as their experience has proved necessary for the successful prevention of fire losses.

The average business man does not realize or appreciate what the losses by fire each year mean to the business community. In an unthinking way he imagines that most of it is covered by insurance and comes back to the owner. He does not realize that every dollar paid out by the insurance companies for losses, is a direct tax on the property holders of the country. What he has to pay for insurance is not for his protection, but to pay the losses of the other fellow. In addition, he is taxed to maintain the organization and profits of these companies, and approximately one-tenth of his annual municipal tax bill is to support a fire department twice or three times as costly as would be necessary if our buildings were constructed more thoroughly, and with greater reference to retarding the spread of fire, and our cities laid out with reference to reasonable protection. The estimated loss by fire in the United States and Canada for 1904, is close to $250,000,000; that is, so much actual value wiped out of existence before giving its measure of usefulness and earning capacity during its natural lifetime. In the years of depression of '93 and '94 the press and business world were much distressed because fifty or sixty millions of gold were shipped to Europe. This gold was not to sink forever in the ocean, but to pay debts and be used again in the proper channels of trade. Yet the same press and business world is not the least alarmed at the annual loss of over two hundred million dollars by fire. Many most excellent citizens and editors are greatly disturbed at the tremendous annual tax of one hundred and sixty millions for pensions and ninety millions for a navy. Yet the business men and property owners are taxed nearly a like amount each year to maintain their insurance and make good their losses.

In the case of pensions there is no property loss. The money goes simply into the channels of trade. In the navy the vessels serve a period of usefulness before they go out of existence and the largest part of the appropriation, which goes for maintenance, simply swells the tide of business and is not lost. But, in the case of fire losses, the wealth of the community is simply spread out a little thinner and made to fill the void caused by great conflagrations. Only the wonderful growing wealth of the country enables it to stand this tax without seeming hardship.

In order to stop this drain the insurance companies have been compelled, not by public sentiment, but for self-preservation, to organize and attempt a practical betterment of conditions. Their report deals minutely with local conditions and recommends changes and additions that will call for large outlays for apparatus and entail a greatly increased annual expense for maintenance. The estimated cost of these changes is

about $90,000 for installation and $90,000 for annual maintenance in the Fire Department alone. This brings us face to face with a question of expense that now seems unreasonable, but would quickly be demanded by the public and voted after a two or three million dollar fire in which our weakness was practically demonstrated.

The most expensive recommendations are for more powerful engines, more companies and more permanent men. Let us make a careful analysis of our present strength with reference to a conflagration, such as many other cities have had, but which we have fortunately escaped. No one questions but what Worcester is admirably equipped for handling all ordinary fires under favorable conditions of streets and wind. It has been our good fortune to have our most serious and threatening fires under moderate conditions of temperature, and when there was no wind. Even then, the strength of the department was taxed to its limit and the outbreak of another serious fire would have left us in a very dangerous situation. The method pursued by our firemen in handling ordinary fires by close, quick inside work and surrounding it by second and third alarm lines ready to use, if necessary, is generally accepted as the most efficient and practical plan of fight. But sometime there will come a day when a fire will assume such proportions that close fighting either from smoke or heat is impossible. Then the whole plan of battle must be changed.

It is almost an axiom that, given average skill in direction and average effectiveness of organization, the strength of a department is measured by the amount of water it can throw in such a manner as *to reach the fire with solidity and force.* First, let us see just what our strength is, measured by this standard. According to tests made under service conditions the seven engines in service and the reserve engine have a total throwing capacity of 4328 gallons. There are ten hose companies which could with difficulty be made to man fifteen high service streams. Allowing 300 feet of hose and supposing they are supplied from the high service with 120 pounds pressure at the hydrant, they would have an effective pressure of sixty pounds at the nozzle and would throw about 240 gallons each with a 1⅛-inch nozzle. With a 1¼-inch nozzle under the same conditions, they would throw 260 gallons, but at a pressure of only forty-six pounds at the pipe. Allowing 240 gallons per stream the fifteen streams would throw 3600 gallons, which, added to the 4300 of the engines, would make a total of 7900 gallons as the maximum amount of water the department can handle. Inasmuch as it is seldom that all lines are at work at the same time, owing to changing positions and bursting hose, it is safe to say that 7000 gallons per minute is about the practical strength of the department, where the high service is available. Without the high service it would be very much less. The low service is useless in a large fire, except for engines. But under present conditions, less than half of this quantity would be available upon the hottest and most dangerous part of a large fire. It has been proved over and over again in the larger cities that 1⅛-inch streams under sixty pounds' pressure at the nozzle, are absolutely useless against an intense fire that has to be fought from a distance. The water evaporates long before reaching the burning material. Under those conditions nothing but 1½-inch to 2-inch streams with pressure not less than ninety pounds at the nozzle would have any effect. A 1¾-inch stream under that pressure would throw about 900 gallons, and a 2-inch stream about 1150 gallons.

The city has at present siamese deluge sets available for two 1½-inch streams, and one 2-inch stream, making available less than 2600 gallons of water per minute that would do any good upon a conflagration. They would be the only streams of any use above the third floor when conditions compelled fighting from the street. Thus it is seen that the equipment for stopping a serious fire in the congested districts is lamentably weak. The city of New York sent to Baltimore nine engines. Those nine engines could throw about 20 per cent. more water than the entire Worcester department with its seventeen companies. They were equipped with apparatus for handling powerful streams and could maintain

three times as many two-inch streams as our department. We have the water, and we have the men, but not the apparatus for using it. The cost of maintaining the department has increased very rapidly in the past few years, but with very small additions to its strength. Suppose that two extra first size engines, as has been recommended by the chief, were substituted for engines one an dthree, and that six additional deluge sets capable of using 2-inch streams were purchased. They would add 4200 gallons, or nearly 60 per cent., to the water thrown by the department, and 180 per cent. to the strength of heavy fire fighting service, provided the high service was available for the deluge sets not used by the engines. The first cost would not be in excess of $14,000—leaving two excellent engines for use elsewhere and practically *no expense additional each year for maintenance.* The conflagration risk is the greatest of all to the welfare of the city and against this we have the least protection.

The recommendation for more permanent men has long been advocated by the heads of the department. Many times during the year apparatus goes to a fire with only a driver and one man on the wagon. This has caused serious delay at times in getting water on the fire. The first five minutes are the most important in any fire and it is not good business to spend large amounts of money to facilitate the quickest alarms and hitches and greatest speed in apparatus, if there are not men enough to operate it advantageously when it arrives. Perhaps the greatest need for more permanent men is upon the ladder trucks. In the last few years many large apartment houses have been built containing from five to twenty families. At any one of them a fire is liable to occur and spread with such rapidity that perhaps twenty people would have to be taken down on ladders. There are many hotels and shops where the same conditions occur. If both of the aerial trucks carried their full complement of permanent men (one has five and the other seven, including the drivers), they would still be short-handed for quick life-saving. And when speaking of ladder service it might be well for the public to know that one of our aerial trucks has been in service nearly nineteen years and the other sixteen years. That it takes six men several minutes to raise them. That after fifteen years of rattling over the pavements, accidents are liable to occur at critical times. That perhaps no kind of fire apparatus has been improved upon more in fifteen years than aerial ladder service. The new trucks are stronger and much lighter and can be raised by two men in from one to two minutes. Some day, when perhaps a dozen, if fortunately not more, lives are lost by inadequate ladder service and lack of men, much criticism will be visited upon the department. This will not be merited, for more permanent men and improved apparatus have been repeatedly asked for. The recommendation for an engine and ladder company in the vicinity of Newton Square would add materially to the strength of the department and would give needed protection to a large district not well protected at present. The nearest ladder companies to this district are at headquarters and Prescott Street. While most of the buildings are not large or high it is readily seen why the insurance committee recommended a ladder company for this district.

There are many other recommendations which the limits of this article will not permit of discussion. The most important suggestions do not affect the Fire Department directly, but deal with our building laws and ordinances. We are a short-sighted and extravagant people. We allow large and high buildings to be built of highly combustible materials. We pierce them with light shafts and elevators to assist the quick spread of fire. We fill them with merchandise massed in large floor areas. Underneath and inside this bonfire we allow basements and bins that are the rubbish heaps of the building and serve excellently as a kindling for the pile above. And then we are obliged to spend many scores of thousands of dollars yearly to protect them and prevent, not only their destruction, but to keep them from endangering all adjoining property. Some day the laws of the Commonwealth will consider it as great a nuisance to maintain a fire trap

as a menace to the community and adjoining property, as it is now to maintain buildings whose sanitary conditions are a menace to public health or whose occupants are a source of danger to the morals of the people. While we must necessarily maintain an effective equipment of fire apparatus to protect what we now have, yet very much can be done at no expense to the city to make the protection more perfect.

Require by legislative act or ordinance automatic sprinklers in all mercantile and manufacturing buildings of large floor area and height in the congested district and especially in the basements, elevator and light shafts, with ample street connections for the fire department, and it would be equivalent to adding several engine companies to the department at no expense to the city. It would work no particular hardship upon the owner, for unless he wants it to burn, his protection is greater and his saving in insurance will pay very handsome interest on the cost of equipment. The various suggestions as to building laws and construction are not experiments. They are the result of years of experiment and practical experience. Local protection by automatic sprinklers and the enforcement of a few practical principles in construction have been well tested by manufacturers through the agency of the Manufacturers Mutual Insurance Companies. By means of the local protection and building regulations and quarterly inspections, the losses for years of the conservative and oldest companies have been about four cents on every $100 of insurance issued, and about ninety per cent. of the premiums has been returned in dividends to the insurer. This system has been tried for upwards of twenty years and its success has been thoroughly proved.

If every building in the mercantile conflagration district was properly equipped, the chances of a fire extending beyond its walls would be very remote.

The time is coming when the cities will be compelled to take some such action, for the constantly increasing cost of maintenance of the fire department is a serious drain upon the resources of a city. And each additional company and house adds very fast to the yearly expense. The report in detail may be open to many differences of opinion, but the fundamental principle is right and necessary, and the matter should be taken up by the City Council and Board of Trade, and a plan of improvement in fire protection, building laws, and water works, along scientific and practical lines, recommended and adopted.

Such action would be of great value to the whole community and would save the city thousands of dollars.

The committee very carefully refrain from any threat to raise the rates in case their recommendations are not heeded, but there is little doubt that a failure to act in some way upon their suggestions will be followed by a material increase in the rates.

Since the preceding article was written the city has had an object lesson in the Crompton block fire, which serves to emphasize some of the statements made therein. It showed clearly the need of more permanent men. The alarm came in during meal hours. All the call men were at their homes and part of the permanent men were at supper. The result was that few of the first or second alarm companies arrived at the fire with more than two or three men, including the driver. One man has to be left to connect at the hydrant and let on the water. If there were two on the wagon the driver has to turn his horses over to a bystander and lay the line alone. If there were three on the wagon, two men are left to drag a heavy line of hose up stairs or up a fire escape. There was a delay, but it was unavoidable with the present assignment of permanent men. How much it cost it is of course impossible for any one to say, but the judgment of those best qualified to know, is unanimous that, with a fair working force on each piece of apparatus, the extent of the fire would have been much less. If there had been lives at stake the results would have been very serious. Is it surprising that the committee advocated a large increase of permanent men?

The fire also demonstrated that the high service was none too good for effective work. The pressure at the City Hall fell to 110 pounds at the height of

the drain upon it. This means about fifty to sixty pounds at the end of a 300-foot line of hose with a 1⅛-inch nozzle,—an excellent stream for inside work and dwelling house fires, but very ineffective for street or top of building work. Even the three-way deluge set on the high service only fifty feet from the hydrant, with a 1¾-inch nozzle, was not very effective above the fourth floor. It was the most powerful stream the department can command except by using two engines on the same set instead of high service. Yet in a high wind it would have been impotent for use on the top floor of Crompton building. Nothing but a water tower with the highest engine pressure would have protected the Walker building, and it is doubtful if that could have protected the Front Street buildings.

As an instance of the power of apparatus in use in many cities, water towers are built to take six powerful engine streams each for the tower and for a deck stream located on the frame of the tower. As many can be used as needed, but the maximum is for twelve streams concentrated into two, requiring the combined efforts of four first-size engines.

The popular delusion is that our high service makes our department invincible. It is most admirable for almost every fire, but for the emergency will be found wanting. High power apparatus costs no more to maintain than low power, and when the crisis comes the lack of it will probably mean the difference between a $150,000 loss and $2,000,000. Large engines in the centre of the city and apparatus for handling high-power streams are sadly needed.

IRVING E. COMINS.

LATEST UNION STATION PLAN.

THE Magazine this month publishes the latest plan for a Union Station in Worcester. It is one of the features of the grading proposition, dealing with one of the most important factors of the entire question. It is the abandonment of the present station site and taking of the original site of the New York, New Haven & Hartford Railroad Company, that at Washington Square. The railroads appear agreed upon this location and there does not appear to be serious objection from the citizens of Worcester. Whatever objection has been offered is relative to the proposed plan of the building in matter of arrangement.

Mr. Thomas J. Sawyer, in the Worcester Magazine, July of last year, showed a plan for a station on the Washington Square site which was favorably commented upon at that time. Since then he has altered his plan, making the arrangements better suited to public travel than in the newest railroad plan.

The plan for the Union Station as now presented provides for a structure the entrance to which shall be on a level with Washington Square when the new grade resulting from the abolition of the grade crossing at that point has been established. This does away with a rather steep incline from the square to the entrances, as was the case in the original drawings of a year ago. The approach to the station will be about ninety feet from the line of the square, with a fountain erected in the centre of the area, and provision made for spur tracks of the Consolidated Street Railway running up to within a few feet of the entrance doors, thereby making it possible for passengers to reach or leave the station by street car without going out from under cover.

The plans for the building call for a structure of brick with terra cotta trimmings, but a general sentiment prevails that if stone was used the station would be more imposing and massive. The waiting rooms are on the ground floor, where also are located in one corner the dining room, in another the retiring rooms, while at the extreme west end, opposite the entrance, are the baggage accommodations. The waiting rooms will be about one-half of the size of the

waiting rooms of the South Terminal Station in Boston.

Leading to the platforms above, which are on a level with the rails of the various roads, are two broad stairways. The main stairway is on the south side of the tracks of the Boston & Albany Railroad, the other stairway, which will be used for passengers desiring to take either the New York, New Haven & Hartford or Boston & Maine line trains, will be at the west end of the station, the trains being boarded just south of the present viaduct. Those arriving on incoming trains, however, if they care to do so, can reach the street directly from the platforms without entering the station. One of these platforms will run in a westerly direction so that residents in the Millbury Street section of the city can turn toward the station at the Green Street crossing and walk from there along the platform to the station. The rooms for heavy baggage are in the southwest corner of the building, and it will be taken to this room by means of a passageway leading from Front Street, thereby removing from the front of the building all traces of the baggage end of the railroad business.

In addition to the through tracks of the Boston & Albany road, east and west, and of the connecting iron of the New York, New Haven & Hartford and the Boston & Maine roads, north and south, there will be stub tracks along both the Boston & Albany and the New Haven rails for the use of local trains.

The plan provides for a frontage for the station on Washington Square of 800 feet and sets back from the line of the square from ninety to one hundred feet. The second story of the building will be practically upon a level with the station platforms, which are twelve feet above the ground floor. This story will be in semi-balcony effect, something after the style of the offices in the South Terminal Station in Boston. Leading from this balcony will be the offices of the station officials and the divisions agents and staffs. The only alterations in streets involved by the adoption of the drawings as they stand to-day, is the extension of Canal Street under the viaduct to reach the station baggage rooms. Then South Harding Street, on the other side of the tracks will be cut through, which will give a direct line of approach to the station from Vernon Square.

The property involved by the construction of the station, according to these new plans, is owned by a dozen different individuals and comprises in the aggregate about 75,000 square feet. The largest individual owner is the Arcade Malleable Iron Co. Although having a frontage of but thirty-seven feet, it runs back to a depth of 356 feet, thereby making that lot cover fully two-fifths of the entire area. The total valuation of the property involved, according to the last valuation figures of the assessors, is a trifle under a quarter of a million dollars.

HOUSING CONDITIONS IN WORCESTER.

The following paper, read before the Woman's Club, treats of one of the most important phases of Worcester civic life. It is given in full.

IN coming before you to-day to speak on housing conditions in Worcester, it is not with the expectation of saying anything strange or startling, or even anything that is very new, but simply with the intention of telling you what I have seen of the dwellings of the poor as I have gone in and out for the last ten years. For somehow we always think of the housing problem as essentially a problem of the poor. Yet many of us who have been through the ordeal of house-hunting with rather definite ideas as to what we wanted in location, accommodation, and expense, have had reason to feel that the housing of ourselves and our own household goods with any satisfaction is, indeed, a problem. What, then, must it be to the man who knows that the expenditure of one-fifth of his income for rent, the usual proportion, means finding a home for himself and wife, with a family of five, six or seven children, at $10 a month, to say nothing of the difficulty of feeding and clothing such a family on the remaining forty dollars a month? No wonder that the woman who was a little weary with the struggle, said: "Between rent and debts it is an awful job to live." And yet many homes, in every way worthy of the name, exist in this city to-day of which the rent is not more than $10 a month.

What, then, are the conditions? To begin with, Worcester has no real slums, in the sense of any considerable area, where people are huddled together in crowded tenements under unwholesome and degrading conditions.

Have you ever seen the lower east side of New York, on a summer evening, Ludlow Street and Rivington Street, where the first social settlement in New York was established? Have you seen the throngs of men, women, and children who pour out of the tenements? Worcester has no such conditions. The real crowding has not yet begun. In proof of this let me give you some figures. In considering the subject we selected twelve streets, not all in one location, three or four from the Island district, three or four from the Meadows, streets where I knew the rents ranged from $5 to $12 a month. We counted the number of dwellings and the number of tenements. We found that there was an average of 2 1-12 families to a dwelling; in other words, we found that for every twelve dwellings there were twenty-five families. This does not mean that there are no tenement houses containing more than three families. What it does mean is that there are still many little cottages left in which only one family lives, and many buildings in which the ground floor is used for a shop, with one tenement on the floor above. In fact, of the 592 houses studied, we found that 169, or a little over one-third of the number, contained only one family, while only seventeen contained more than three families. Compare this with one Boston house that I know. In what was intended for a back yard, a block of two houses five stories high has been built. Two families live on each floor, each family occupying a square room and a hall bedroom, so that twenty families live in that back yard. Such conditions are absolutely unknown in Worcester.

But there are two kinds of overcrowding in tenements: that of families beneath one roof, a condition which destroys family life and leads often to degrading associations; and the crowding of large families into small tenements, a condition almost as degrading because of the impossibility of anything like privacy, and the temptation which it offers to the older members of the family to spend their evenings on the street corners and in the saloons. In considering this last proposition, we se-

lected fifty records almost at random from among those of families with whom we are having present dealings, and made a little study of internal conditions. It so happened that the fifty families selected lived on thirty-nine different streets, so that they represented many different neighborhoods. We found that the average number to a family was five and a very small fraction, and that the number of rooms averaged three and eight-tenths to a tenement. In going over the families individually, we found two families of nine each, and four families of eight each. Of these six families, four had four-room tenements, and two had three rooms. In all these cases of large families, most of the children were quite young, that is, under fifteen years of age. It is obvious that three or four rooms do not give sufficient accommodation for a family of nine persons. Think of the difficulty of ventilation, of taking a bath with any decency and self-respect. In only two cases did the tenement consist of two rooms, and one of these was occupied by a woman living alone. In fact, I have been sorry sometimes that there were not more two-room tenements in which a woman, or even two women, might make a little home. But there would be the temptation to let such tenements to families, especially after the property had run down, and become undesirable for the class of tenants for whom they were intended. They would then offer another opportunity for overcrowding, a temptation not needed in any city.

The average rent of these tenements was $7.59 a month, a much lower rate than would be paid for similar accommodations in larger cities. Incidentally it may be interesting to note that these fifty families, living on thirty-nine different streets, represented eleven nationalities. The overcrowding in the cheap boarding-houses I have not had the time nor the opportunity to investigate, although I know that it exists. For instance, my attention was called recently to a case where a family consisting of four persons, living in three rooms, had nine men boarding with them. This information came to me incidentally and not in connection with my own work. But it is an indication of a condition which should be investigated and if possible remedied.

It has been said that in the construction of tenement houses, a high standard requires "fire-proof construction, economical arrangement, adequate light and ventilation, and artistic architecture." To this I should add, if indeed I did not place it first, sanitary plumbing. How do Worcester tenements come up to this standard? The first, that of actual fire-proof construction, does not seem necessary for the present, at least, especially as the laws say that hereafter no frame building to be used as a tenement house shall be built more than three stories, or forty-five feet high. Economical arrangement has also been attained in most cases: not only economy of space has been considered, but such planning as would make possible economy of fuel. For instance, one very common plan for tenements of three rooms is a square living-room and two bedrooms, each half the size of the living-room, and both opening from the same side of the living-room. The chimney is placed just where the dividing line between the two bedrooms joins the kitchen wall. Thus the stove stands in the centre of the floor space of the three rooms and can easily heat all of the tenement. One such tenement comes very vividly before me, the first one of the kind, I think, that I ever saw. It was a little attic tenement in which lived a large, strong, cheery woman, who was trying her best to provide for five little children and to bring them up well. A poor, meagre, little home it was, but so sunny and clean, and the dinner which was cooking smelled so appetizing, that I could very easily have prophesied, what I have since seen come true, that the children would turn out well.

The present laws on plumbing are full and explicit, demanding the latest improvements and best construction. Many of the older houses, not all of the tenement house class, still have the old-fashioned plumbing and must be watched carefully, both by the board of health and by the occupant. That there are, besides the danger from old plumbing, actual violations of the law,

I have no doubt, but they are not common, and if reported to the Board of Health would be promptly remedied.

Light and ventilation also seem adequate. In fact I have wished some nights when I have heard the wind blowing that some of the houses were not so well ventilated. Dark hallways, and, still worse, dark bedrooms, most serious obstacles to health, are almost unknown in Worcester, at least in the grade of houses which we designate as tenement houses. In fact, I know but two such houses where I am sure of dark bedrooms. One has a shop on the ground floor, and three tenements on each of the two floors above; one tenement on each floor has a dark bedroom. The other house I have been in only once. I saw one dark bedroom, but am not sure of the arrangement of the rest of the house. I am certain that there are dark bedrooms in other buildings, but partly because of their central location these houses still command rents prohibitive to the class of tenants whom I know. As these houses degenerate and become the abiding places of the poorer paying classes, I expect to find a few, I hope not many, dark bedrooms. The point which I have left for the last, in our discussion of standard, that of artistic architecture, I approach with much misgiving, when I think of our three-deckers. And yet are they any uglier than the tenement houses of any of our large cities? They attract the eye quickly because they stand out one after another in such bold relief, but that very separateness which makes them so conspicuous allows many windows into which pour fresh air and sunshine.

Having said so much in favor of our tenement houses, that they are not on the whole overcrowded; that the rents are not exorbitant; that the plumbing is looked after; and that there are compensations for the ugliness of our three-deckers, what is there to be said on the other side? Is Worcester a city of model tenement houses, and is there nothing for us to improve? I have asked several people who are familiar with the housing conditions among the poor, what is the worst thing about our tenement houses, and invariably the answer has been, dirt and shiftlessness.

From my own observation I would add one fault of construction which ought to be considered before it proves to be a serious problem, the basement tenement. The three-decker built on the side of a hill, giving three stories in the front and four in the rear, offers a particularly good chance for this form of cheap tenement. The plan usually gives a couple of rooms with full sized windows, quite different from what we call a basement tenement in the larger cities, but it also allows one or two rooms towards the front of the house which are practically no better than cellars in their lack of light and ventilation, and in their dampness, and should not be used for any other purpose. We have altogether too many damp basement tenements.

To return to the question of dirt and shiftlessness, it would seem on first thought that this was the fault of the tenant and not of the landlord, but I am not so sure of it. There is in Worcester, as in all cities, a class of population whose standard is low, and such people invariably live in houses which reflect most accurately that standard. Which you decide to be cause and which result will depend very much on whether you consider that the condition of destitution in which these people live is the result of environment, and that all people would be decent if they had a chance; or whether you consider that such a condition comes from defects in character, from inheritance, and from lack of training. In the former case you will blame the landlord, in the latter case, the tenant. For my own part I believe both are to blame, and that a dirty, shiftless tenant, and a careless landlord react upon each other to the destruction of the landlord's house and the tenant's home. Saunter through some of our tenement house sections some day, with your eyes open—but do not take too warm a day—what will you see? Old houses going to pieces, so shabbily built in the first place, and so dilapidated now that the wind blows straight through them; no paint, blinds broken, the underpinning banked with ashes, and piles of ashes and rubbish, and incidentally garbage surrounding

the house. Inside the house conditions correspond: blackened ceilings, battered walls, broken stair rails, damp and unwholesome cellars, and the whole place dirty beyond description. This is not an imaginary description; I have seen it all repeatedly. Within the last month I found a family living under conditions impossible to describe. What do you think of a rat hole so large that the ashes, and incidentally much of the garbage, were easily poked down and so disposed of out of the kitchen, at least? And the most discouraging part of the story is that the woman who poked the ashes down evidently thought that it was the proper thing to do. Another evil of these old, tumble-down houses is that the water pipes freeze and stay frozen for days at a time, the only water used in the house being brought from the tenement of some more fortunate neighbor; not a condition conducive to cleanliness or good sanitation. And this, too, is partly the fault of the landlord who leaves water pipes unprotected in the shabbily built and dilapidated houses; and partly the fault of the tenant who fails to do his part, and then hesitates to report to the landlord or to the proper authorities, lest he be told to move, especially as often happens if his rent is in arrears.

What is the remedy for such a condition, so largely the fault of the tenant, so largely also the fault of the landlord? First, a few—there are not many, I think—of the worst houses ought to be destroyed as unfit for human habitation. And I most heartily wish that in their places might be built substantial houses of three and four-room tenements which could be rented for $10 a month. We have some such houses; we need more. Second, our Board of Health should be empowered to employ more inspectors, so that the city could be divided into districts and an inspector appointed for each district who should be responsible for the condition of that district. Third, some more definite and determined effort should be made to raise the standard of the people. Many of them are entirely willing to live under dirty and degrading conditions. The question is, are we willing to let them? President Roosevelt, when Governor of New York, speaking on this subject, said: "Every wretched tenement that a city allows to exist, revenges itself on that city by being a hotbed of disease and pauperism." The visitors, paid and volunteer, of the various charitable organizations reach many of this class, but only a small proportion of the whole number after all. The right kind of social settlement would, I believe, help greatly with this problem, for it is quite as much a neighborhood as a family problem, and in many sections could be best so handled.

And, finally, the landlord should see to it that so much repairing and cleaning as protects health, is done, and that cleanliness is demanded of the tenant. I know it is said that this cannot be done; that the tenants would not appreciate it; and that in a few months they would move out, leaving the house worse than ever, and probably without paying their rent. Then, too, there is the danger of demanding too much of the tenant, of simply forcing the people who are not ready to make quick response, to move into some other house, possibly still more degrading. We shall in that case have improved the house, but not the people; we shall have more tenements where respectable people can live, a good thing in itself, but we shall not have reached those whom we really wanted to help.

Octavia Hill, who has done so much for the betterment of housing conditions in London, says: "I find it easy enough to raise the house, but if you raise it too rapidly the tenants fall out through the bottom."

That a gradual improvement can be made, and that at least a decent standard can be maintained, has been proved. Go into some of the old houses in Boston, on Friend Street and Merrimac Street, where this has been done. The landlord sees to it that the halls are kept clean, and that whitewashing, papering, and painting are done when needed, and demands in return that the rent be paid promptly, and the tenement kept clean. Not only has this been done, but it is said that the houses have paid a fair interest on the investment. And here in our own city there has

been a striking illustration of the same principle. There were two houses located near each other, in about the same stage of dilapidation, and occupied by the same class of apparently degraded tenants. One house changed owners. The new landlord repaired, papered, and painted, and although this house is let to the same class of tenants as before, they have neat, respectable homes. The other house and its occupants have remained in their original condition. And so long as we have landlords who acknowledge frankly and complacently that they own tenements into which they would not dare to have their own daughters go, even on an errand of mercy, what can you expect?

In conclusion, allow me to quote Robert W. de Forest, commissioner of the Tenement House Department of New York: "Let none of you suppose that your cities, however small, will remain free from the evils of the tenement house, which in our large cities has evolved in self-protection, tenement house legislation. The tenement is here in America to stay, and to increase. You of the smaller cities need not go through the bitter experience which has taught New York and other cities their lesson. You can by timely regulation prevent your cities from crystallizing unsanitary conditions, in brick and mortar, which cannot be bettered except at cost to you and them."

MIRIAM F. WITHERSPOON.

MUNICIPAL DECORATION, AND SKYSCRAPERS.

MR. J. RANDOLPH COOLIDGE, JR., of Boston, who has made a study of public building architecture and exterior and interior decoration, gave a smoke talk before the Board of Trade in February, on "Decoration of Municipal Buildings." He paid a compliment to the Worcester Magazine at the outset of his talk by saying he would hardly have dared to give his address before the Board had it not been for the Magazine and the spirit he found in it, he being impressed with the idea that the organization it represented stood for good citizenship and municipal improvement.

Mr. Coolidge illustrated his talk with upward of 100 lantern slides, many of them of Worcester public buildings. He did not hesitate to criticise freely, and from the illustrations accompanying these criticisms, they were fairly well deserved.

He said his interest was awakened more than twenty years ago on visiting the home of one of the citizens of Worcester. It had a very beautiful parlor, with a frieze, a sky, and decorations of butterflies and birds. From this scene his interest arose, and it has been assisted by visits to Europe and by seeing some of the interior decorations lately done in this country.

Then he touched upon the difference usually seen between the interior and exterior of a house. While the rooms may be beautiful, the outside may be of clapboards covered with gray paint. He referred to this as a strange contrast between interior refinement and exterior ugliness, and said that such a condition gives a poor impression of the house, as most people know only the exterior of it. The outside should be in keeping with the inside.

Then he turned to public and semi-public buildings and said that things were opposite here. When one goes into a public building with a handsome exterior, he is likely to find the interior looking like a barn.

He paid his respects to the Union Station. He said that anybody coming to Worcester is struck by the exterior of the station, one of the finest that he had seen, if you stay on the outside, but if you go in you are in a hurry to get out again.

The Court House has an expensive and imposing appearance, but the build-

ing is ruined in interior arrangement by a tunnelled corridor through which the court rooms are reached. The interior of the building is not worthy of the outside.

The State Mutual building is one of the finest office buildings in the country. The entrance is good, and when you reach the interior it is in keeping with the exterior. Such a staircase is what might be expected in the Court House. After showing this of the State Mutual, Mr. Coolidge paid his attention to City Hall.

The exterior is Italian in origin, but is American in its adaptation to the wants of the period. The chambers of the Common Council and Aldermen are emphasized by large windows and the entrance is surmounted by a tower, an emblem of civic pride. The ornaments are placed where they are effective; the carving in the chambers, the window over the Mayor's office and the lamp designs are effective.

A view of the Town Hall at Winchester, England, was next shown, then came the rear entrance of City Hall. Mr. Coolidge suggested that colored windows over the entrance would greatly improve the appearance. Then he showed an interior view of the vault looking toward the ceiling. There was almost nothing to see except the electric lights, which gave the appearance of a balloon. In contrast he showed the hall and staircase of the Boston Public Library, the vault being in mosaic, too, but with a pleasing design.

Next was shown the corridor in the Library of Congress, with a rich vault in mosaics. Mr. Coolidge said that without a great expense it could be substituted over the main entrance to City Hall. Other halls in Congress were shown, one with mosaic designs by John Alexander and the other with a group picture by J. O. Walker.

Mr. Coolidge showed a view of the Boston Public Library, before and after putting in some of the paintings. Then came another view of City Hall, this time the main staircase. He said that while everything else was good, the walls invite decoration. Another view was given of the big vault, and the speaker said the colored windows which are needed should be chosen to harmonize with the color scheme of the wall decorations.

Then a slide showed the interior of the Mayor's private office in City Hall. Mr. Coolidge said that the pictures of the mayors which adorn the walls look as if they want to drop off. The gold frames are hideous; almost all that you can see are large vacant rooms.

Mr. Coolidge thought that as each mayor left the chair it would be an appicture, and have it placed in the wall as a panel, and thus become a part of the room. The rooms themselves are light, and suitably decorated they would never be gloomy.

In the Council chamber, the speaker said, there has been a lavish expenditure for furniture, but there the expense stops. There is a space with good light which would be a good place for mural decoration. In the aldermanic chamber there is also a good place above the wainscoting for pictures.

A wall painting was shown from a building in Glasgow which would be appropriate for City Hall. The mustering of the men on the Common for the Civil War was also suggested as an excellent subject.

A frieze from the art gallery at Whitechapel was shown typifying a group of industries, and this the speaker considered worthy of consideration for Worcester City Hall.

A recent decoration, a wall painting in the public library at Lynn, was given last. It was entitled "The Awakening of Ignorance," and showed the cave dwellers being shown a city of the future. The painting is 15 x 34 feet and cost $5000. Such a picture was considered a good one for one of the Worcester Common Council chambers, and about the proper size. The Aldermen's chamber has a space about thirty-four feet and the Council chamber has one a little larger.

He said that so far as the exterior of the building is concerned it is ahead of any in New England, and probably of any in the United States in a city the size of Worcester. It is a credit to the city, he said, but the interior is not in keeping with the splendid exterior,

and when you enter you are disappointed.

Mr. Coolidge considered that to fit up City Hall according to his ideas would mean an expenditure of about $50,000, but he suggested that instead of putting the work in the hands of a man who has attained fame, an efficient young man be secured. "If you buy names," he said, "you must pay for them." He said that if a skilled young man who has not yet made a reputation should be secured the cost would be considerably less, for it would give the young man an opportunity to make a reputation.

He estimated the cost as follows:

Aldermanic chamber,	$5,000	$1,000	$6,000
Council chamber,	6,000	2,000	8,000
Mayor's rooms,	4,000	1,000	5,000
Staircase windows,	4,000	1,000	5,000
Fifteen wall spaces,	18,000	4,500	22,500
Expert assistance and contingencies,			3,500
			$50,000

He felt that if the city government was enlisted in the project, the money could be raised without an additional expense to the tax payers, while a body like the Board of Trade should be sufficiently earnest to have the work done. Mr. Coolidge's plan is to have the city appropriate $4000 and the Board of Trade be responsible for raising $1000 a year and to have the latter take charge of the work, with contracts extending over ten years.

He said he understands that April 1, $1,235,000 4 per cent. bonds and $200,000 in 5 per cent. bonds were due. These could be refunded at 3½ per cent. and there would be more than enough interest saved to pay the $4000 a year. If the Board of Trade is not interested, he said, it is a sign that the city is not interested to have the improvements made.

The speaker said he always admired the Classical High School. Any one, said he, must admire the buildings of the College of the Holy Cross, and the Insane Asylum looms up splendidly. The Fire Department building is excellent in design and the car barn on Main Street is particularly good. All Saints' Church is a magnificent structure, but it is not the only church in Worcester which could be so classified.

Referring to the Classical High School, he said it would be unfortunate to destroy its present appearance. He considered the architect of the building, Richardson, head and shoulders above all others in America. He said that no one would think of burning a picture by Stuart or Whistler, and while some of the buildings designed by Richardson have been burned the time will come when people will regret that they ever destroyed or changed any of his buildings.

As a suggestion, Mr. Coolidge said a mural decoration of Main Street sixty years ago could be placed in City Hall, and it would be a memorial which would be of interest at all times.

The last smoke talk of the winter was Thursday, March 16th, the Board of Trade hall being crowded. The speaker was Prof. Arthur W. French, at the head of the civil engineering department at Worcester Polytechnic Institute. His subject was "Skyscraper, or High Building Construction." The talk was illustrated with more than 100 lantern slides showing the detail of the modern steel building construction, together with many views of the high buildings in the country.

In opening his address Prof. French said that the building of skyscrapers, or high buildings, is growing rapidly in large cities, and to some extent in the smaller ones. The reason that they have not been erected until recent years was that scientific methods were only introduced a few years ago. Until recently buildings were not erected higher than six stories. In 1880 a bird's-eye view would show an almost level line of roofs except for the spires here and there. In the past twenty-five years several buildings have been erected which run up twenty stories. One of the reasons for the limit of the height of buildings was the size which the walls would have to be under the old methods. For a high building walls of masonry would have to be six to eight feet in thickness, and

that would take up too much space. The weight could not be carried unless the foundation covered the whole area, so something besides masonry had to be found in order to carry the buildings as high as desired.

Steel girders, which are now used in the construction of high buildings, carry not only the weight of the floor work, but the weight of the walls as well.

Prof. French said that the Tacoma building of Chicago was probably the first complete type of skeleton construction and was one of the earliest skyscrapers in the West. The seventeen-story Monadnock building in Chicago was shown upon the screen. In this connection the speaker said that experiments to determine the deflection of the building when the wind was blowing at the rate of eighty miles per hour showed it to deflect about 1½ inch at the top.

While most of the tall buildings of Chicago were built on raft-like foundations of concrete and steel beams, there were some examples of very high and heavy buildings supported on piles and to this class belonged the Schiller building. These piles were driven down fifty feet and loaded with fifty-five tons per pile. Much damage was done to neighboring buildings by the piledriving.

The first in the series of New York buildings shown was that of the Park Row building, the tallest inhabited building in the world, towering up thirty stories. The foundations of the building are seventy-five feet below the curbing and there are 3500 piles driven through the sand to bed rock. Eighteen million pounds of steel were used in the frame. The building stands so firmly that a plumb-line fails to show the slightest tremor even during the highest gales. This building contains 950 offices, 2080 windows, 75,000 electric lights and 35,000 tenants. It cost $3,500,000, and pays about eight per cent. a year on the investment.

The Standard Oil Co. building at 26 Broadway, the speaker said, had one interesting feature of construction in that in enlarging and making higher the old nine-story building, it was found that the wall of the old structure could not sustain the weight of the new stories and to accomplish the desired results an adjoining lot was bought and built on. The new frame projects over the old building and carries the additional six stories.

The Manhattan Life's building was the first high building in which the pneumatic caisson was used in securing the foundation, as it was found that it would be impossible to provide piles enough to carry the loads. Open excavation to the bed rock fifty-four feet below was impossible because of danger to neighboring buildings.

The Gillender building was remarkable for its extremely narrow width as compared with its height. It is a twenty-story structure, having a height of 280 feet above the sidewalk, with its length only seventy-five feet and its width twenty-five feet. The vibrations on the top floors of the building during high winds is sufficient to move water in a bowl and similar action has also stopped pendulum clocks. Such vibrations are not necessarily any sign of structural weakness.

Referring to fire-proof buildings, Prof. French said: Steel will not burn, but will soften in a fire. Stone will crack, but brick and Portland cement will stand the heat well. A masonry chimney lined with brick is about as near fire-proof as anything.

The effect of a fire in the Home Life Insurance Company's building was shown, the fire entering the ninth floor of the fifteen-story structure from a neighboring building.

Some people, Prof. French said, consider the skyscraper a nuisance. The owner gets more rental, and it increases the value of land, but attempts are being made to put restrictions on the height of buildings. In one street in New York the sun reaches the street only during a portion of June. With a 100-foot street and 300-foot buildings the sun does not get below the fifteenth story between September 21st and March 31st.

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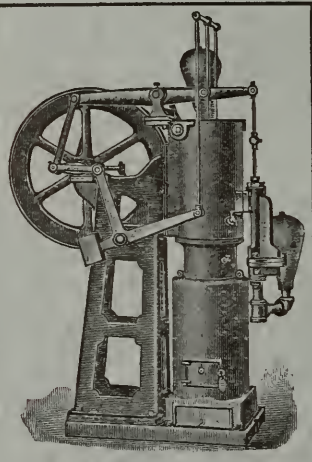

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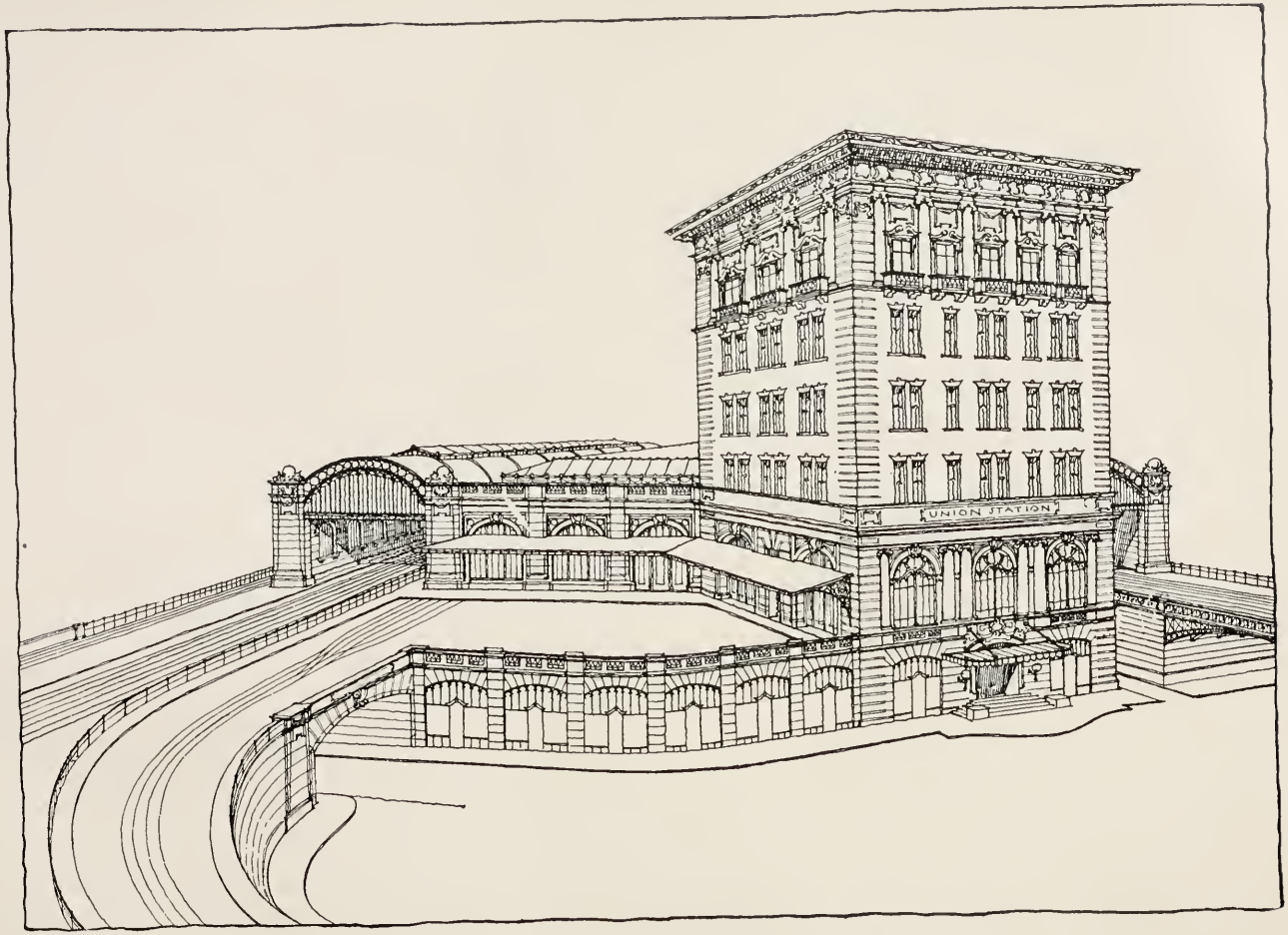


PROPOSED UNION PASSENGER STATION FOR WORCESTER.

Designed by Edward Topanelian, Architect.
State Mutual Building, from drawing by T. J. Sawyer.

The Worcester Magazine.

VOL. VIII. MAY, 1905. NO. 5.

This magazine is published by the Worcester Board of Trade. Its reading pages are devoted solely to municipal development, good citizenship and the business welfare of Worcester. Space in these pages is not for sale.

MAGAZINE AND MUNICIPAL COMMENT.

To Prevent Changing Grades

The Magazine this month publishes an article by Mr. Thos. J. Sawyer on the proposed new union station in Washington Square. It is accompanied by a floor plan sketch prepared by Mr. Sawyer, also a perspective view and frontispiece designed and drawn by Mr. Edward Topanelian, 705 State Mutual Building, from a general description furnished by Mr. Sawyer. The architect has provided an attractive design to bring out the features advocated in Mr. Sawyer's article.

Effort was made to get a ground floor drawing of the railroad company's plan, for the April number of the Magazine, when the perspective plan prepared by the Boston & Albany Railroad engineers was shown. It was exhibited in the Mayor's office at City Hall for several days, and was used before the Legislative Committee hearing as the railroad plan. The plan provides for a separation of grades, with the waiting room, ticket offices, etc., on the ground floor, and a 12-foot climb to the track level. Mr. Sawyer was not one of the advocates of Washington Square as a location, but now that is practically agreed upon, he wants the waiting rooms, ticket offices and other rooms on the level with the tracks. His article goes into the question fully and he shows by his plan how this can be accomplished. Worcester does not want to settle so important a matter until it is settled right. The cities where there has been an elimination of grade crossings by separation of grades have, as a rule, insisted on waiting rooms and tracks on the same level. There are a few exceptions, but Worcester does not want to be an exception. It is a proposition worthy of careful study and sufficient agitation so that when the thing is done it should be done right.

Truths Tersely Told

Once in a while some one comes out in a public statement telling the people of Worcester some truths about themselves. They are not particularly new, but a great many persons lack the courage of setting forth these truths in a public utterance. Of the four or five speeches at the Board of Trade banquet, the most forceful, from a local standpoint, was that of Rev. Dr. Willard Scott.

The burden of his remarks was to the effect that Worcester own itself, that is to say, its own industries as far as possible. He said that there is as much money available here to furnish the necessary capital as elsewhere, that there are men as well endowed among its citizens, for carrying on of great industrial enterprises, as are to be found anywhere in the

world. The thing he deplored and urged the citizens to fight against is the régime of absentee masters of its industries.

He said he had been told that Worcester is a beautiful city. He has taken rides and found that the residences are too far scattered. There is no distinction. The sights do not impress the eye. Worcester men should be willing to build houses that a stranger can look at and admire. The splendid benevolence is of a few individuals, rather than the many. He thought Worcester was well on the way to become an Oxford or a Wellesley, if the institutions are given a firmer foundation of more men. It has some, but not enough. It can be a university centre, as it is wonderfully fitted and situated.

He believed that the Worcester Natural History Society and the Art Museum do not receive the attention they should. One man should not support them, but all. He thought Worcester was branching out too much. It should specialize.

He asked that sons of illustrious fathers strive to emulate them. Young men must rise to take the places of their elders, or civic pride will decrease. He believed that former Senator George F. Hoar's place will be filled eventually. It must be done by uplifting and helping the young men—by teaching them to strive, not for reputation or fame, but for righteousness.

Mr. Thayer's Practical Idea

Mr. Charles M. Thayer has written a communication to the daily newspapers suggesting a popular subscription to a fund for the erection of a memorial to Senator George F. Hoar. Mr. Thayer struck a popular chord in the feelings of his fellow Worcester citizens, and coming from so prominent a source there is no reason why the proposition should not be carried out along the line suggested by Mr. Thayer. The brief communication brings out a practical idea and one that is to the point. If there is one worthy act Worcester people should perform, it is to erect a memorial to the great man who honored this city and the Commonwealth of Massachusetts in the United States Senate for more than a quarter of a century.

New Ward Lines

The City Council experienced little trouble in adjusting the ward lines, although some opposition developed among Democratic members. From the make-up of the ten wards, an addition of two, it would appear that the Democrats are certain of three wards, with a fourth likely to be disputable ground. Based on the new lines City Hall is in Ward 9, and Harrington Corner in Ward 10. City Hall is changed from Ward 3 and Harrington Corner is changed from Ward 8. Briefly told the new ward lines are as follows:

Ward One.—Lincoln square to Lincoln street, to the boundary line between Worcester and Shrewsbury; thence by the boundary line between Worcester and Shrewsbury and Worcester and West Boylston; thence by the boundary line between Worcester and West Boylston and Worcester and Holden to Salisbury street, Beechmont street, Institute road, Haviland street, Highland street, Russell street, William street, North Ashland street, Highland street, to Lincoln square, and contains 2,335 registered voters.

Ward Two.—Lincoln square to the boundary line between Worcester and Shrewsbury; thence by the boundary line between Worcester and Shrewsbury, Worcester and Grafton and Worcester and Millbury to the Boston & Albany railroad, Putnam lane, Shrewsbury street, Adams street, Belmont street, Merrifield street, East Shelby street, Prospect street, Summer street, Lincoln square, and contains 2473 registered voters.

Ward Three.—Lincoln square, Summer street, Prospect street, East Shelby street, Merrifield street, Belmont street, Adams street, Shrewsbury street, Putnam lane, Boston & Albany railroad, to the boundary line between Worcester and Millbury, Grafton street, Ash avenue, Houghton street, Union avenue, Mendon street, Grafton street, Temple street, Green street, Park street, Salem square, Front street, Commercial street, School street, Union street, Lincoln

square, and contains 2390 registered voters.

Ward Four.—Grafton street, Water street, Mendon street, Union avenue, Houghton street, Heywood street, Winthrop street, Providence street, Spurr street, Vernon street, Endicott street, Perry avenue, Harlem street, Millbury street, Quinsigamond avenue, South Harding street, Vernon square, Harding street, Harrison street, Water street, Grafton street, and contains 2369 registered voters.

Ward Five.—Park street opposite the centre of Salem street, Green street, Temple street, Grafton street, Water street, Harrison street, Harding street, Vernon square, South Harding street, Quinsigamond avenue, Cambridge street, Southbridge street, Southgate street, Norwich & Worcester railroad, Cambridge street, South Crystal street, Boston & Albany railroad, Southbridge street, Salem street, Park street, and contains 2456 registered voters.

Ward Six.—Vernon street opposite the centre of Endicott street, Spurr street, Providence street, Winthrop street, Heywood street, Houghton street, Ash avenue, Grafton street, to the boundary line between Worcester and Millbury; thence by the boundary line between Worcester and Millbury and Worcester and Auburn to a point eighteen hundred feet westerly of the main track of the Norwich & Worcester railroad, Hope avenue, easterly boundary line of Hope cemetery, Middle river, Sutton lane extended, Boston & Albany railroad, South Crystal street, Cambridge street, Norwich & Worcester railroad, Southgate street, Southbridge street, Cambridge street, Quinsigamond avenue, Millbury street, Harlem street, Perry avenue, Endicott street, Vernon street, and contains 2227 registered voters.

Ward Seven.—Main street opposite the centre of Madison street, Maywood street, Park avenue, Mill street, Gates lane, Main street, to the boundary line between Worcester and Leicester; thence by the boundary line between Worcester and Leicester and Worcester and Auburn to a point eighteen hundred feet westerly of the main track of the Norwich & Worcester railroad, Hope avenue, Hope cemetery, Middle river, Sutton lane extended, Boston & Albany railroad, Southbridge street, Madison street, Main street, and contains 2336 registered voters.

Ward Eight.—Main street opposite the centre of Chandler street, Main street, Maywood street, Park avenue, Mill street, Gates lane, Main street, to the boundary line between Worcester and Leicester; thence by the boundary line between Worcester and Leicester to Fowler street, Mill street, Chandler street, Lovell street, May street, Woodland street, King street, Bluff street, Bellevue street, Chandler street, to Main street, and contains 2302 registered voters.

Ward Nine.—Main street opposite the centre of Pleasant street, Front street to a point opposite the centre of Salem square, Park street, Salem street, Southbridge street, Madison street, Main street, Chandler street, Bellevue street, Bluff street, King street, Woodland street, May street, Lovell street, Chandler street, Park avenue, Pleasant street, Main street, and contains 2356 registered voters.

Ward Ten.—Lincoln square opposite the centre of Union street, School street, Commercial street, Front street, Main street, Pleasant street, Park avenue, Chandler street, Mill street, Fowler street, to the boundary line between Worcester and Leicester; thence by the boundary line between Worcester and Leicester, Worcester and Paxton and Worcester and Holden to Salisbury street, Beechmont street, Institute road, Haviland street, Highland street, Russell street, William street, North Ashland street, Highland street, Lincoln square, and contains 2418 registered voters.

Half Fare Rates

The Supreme Court of Massachusetts has given a decision which holds that half-fare rate on street cars for children is constitutional. The Court assumes that the fixing of relative rate by law is proper as a matter of course; the only consideration entering in is that a company is not to be required to

conduct its business at a loss. It is pointed out that if a community desires a half-fare rate for school children, it may require the company to grant it, although the company may be compelled in self-defense to increase the general rates of fare to adults. The law may even go to the extent of requiring street railways to carry children free, in the interest of popular education, but in such case neither the companies nor other users of the street cars can be required to bear the expense. It must be put upon the tax payers.

This decision comes with particular interest at this time when some of the Massachusetts street railways are increasing their rates of fare because they cannot do business profitably at the old rates. Some of the western Massachusetts roads, like the Springfield & Hartford, and the eastern roads like the Boston & Northern, have increased rates by making town boundaries the limits of each five-cent fare. If these companies are compelled to carry school children for half fare, there are likely to be some further increases in this direction. In some cases, where street railway companies voluntarily assumed the half-rate obligation, they have found that they paid too dearly for their franchises, and the school rate has been borne at a loss, while the regular five-cent fare barely paid operating expenses and fixed charges.

Faith in New England

The announcement of the transfer from Bradford, England, to Greystone, R. I., of the mills of Joseph Benn & Sons, manufacturers of mohairs and alpacas, ought to bring pause to the pessimism about decadence of industry in New England which has been frequently voiced in the recent past. According to the New York Journal of Commerce, the new mill, which will occupy a building 400 feet long, is nearing completion, and work is being rushed in setting up the machinery to begin operations upon a small scale. The industry is expected to employ ultimately not less than a thousand operatives, and the building of cottages for them has already infused new life in the village where formerly wool-shoddy mills were operated. The operation of the American protective tariff and the steady increase of the business are given as the reasons for its transfer to this country from England. Its establishment in a New England State ought to encourage those New Englanders who have been prone to see in the natural rise of the Southern cotton-mill industry only disaster for their section. There is enough suggestion in the move of Joseph Benn & Sons to eliminate even the slightest hopelessness from any New England mind and to strengthen there the old spirit which more than once has been manifested in turning apparent defeat into victory.

State Board Against it

The State Board of Trade, through its Executive Council, is against the proposition of steam railroads purchasing the properties of street railway companies in this State. A protest has been filed by the Committee on Transportation against the passage of the bill which gives the Boston & Maine Railroad the right to purchase street railway lines. The resolution that brought about this protest was introduced by Mayor W. H. Blodget of Worcester, who is a delegate from the Worcester Board of Trade to the State Board. At the recent meeting of the Executive Council of the State Board votes were passed condemning street railway and steam road amalgamation and stock-watering practices.

Makes Excellent Choice

Mayor Walter H. Blodget has appointed Mr. Rufus Bennett Fowler member of the Parks Commission for a term of five years. The choice is an excellent one, meeting with the hearty approval of the public. There is no more public-spirited man in Worcester than Mr. Fowler and he has always taken particular interest in public grounds. He is original, has splendid ideas, particularly on subjects of municipal life, which he has frequently expressed, and undoubtedly will be a valuable acquisition to the commission which has the laying out and management of one of the most attractive park systems in the country. In the new position he is a man of ideas in good company.

SUGGESTIONS FOR WORCESTER'S GROWTH.

THE annual meeting of Worcester Board of Trade took place Tuesday, April 18th, in Board of Trade Hall. Reports of President, Treasurer, Secretary, and Standing Committees were read, and the following officers were elected:

Clerk of Corporation, Mr. Charles Perkins Adams; Treasurer, Mr. H. Ward Bates; Auditor, Mr. Charles A. Chase; Directors for four years, Mr. George F. Booth, Mr. George F. Brooks, Mr. Thomas T. Booth, Mr. Irving E. Comins and Mr. J. Russel Marble; Membership Committee for one year, Mr. E. B. Dolliver, Mr. W. H. Cook. Mr. H. A Macgowan, Mr. William Forsberg and Mr. Charles T. Tatman.

The report of Treasurer H. Ward Bates shows a balance on hand of $3,195.63.

The report of President Harry W. Goddard is:

Members of the Worcester Board of Trade: We can well say that our year ended in a blaze of glory. I believe it is generally admitted that the Board of Trade banquet of April 1st was one of the most successful ever given in the city. There is no denying it was expensive: a great many good things come high, but I honestly think it was worth the money. It gave us an opportunity of meeting one of the brightest and most conspicuous figures in American political life of to-day, and it drew the attention of unnumbered people to Worcester. Even as far away as Chicago a report came that the speech of Secretary Taft at Worcester, on the Philippine question, was the best presentation of the conditions existing in the past, present and future in these islands that had ever been given to the American people. Besides this, what I consider quite as important, is the fact that the banquet brought together our members in a social way. This is something that I wish could be done oftener. Let us get better acquainted with one another and all work together with one purpose, the upbuilding of Worcester. Of course we could not afford to have a banquet very often on the elaborate scale of our annual ones, but getting together in a social way would do us lots of good.

At the beginning of the past year a change was made in the office of Secretary of the Board, and Mr. Herbert M. Sawyer was elected to succeed Mr. Squier.

There has probably not been as many committee meetings called the past year as usual; partly because matters were not brought to our attention and partly because it has been simply impossible for the President to give time enough to the Board of Trade to make work for the different committees. There is plenty of work to do and we have a first class Secretary to carry out any plans that the President or Directors may formulate. No matters of extraordinary interest have been brought before the committees this year. The New Enterprise Committee, as usual, has had to bear the brunt of the work until the past six weeks, when the Committee on Meetings and Receptions had to take their turn at hard work. Both committees acquitted themselves well. The latter committee are especially deserving of credit for the success of our recent banquet. It required considerable time and energy, but I believe every member felt repaid by the success which attended his efforts. In this connection I copy from a recent personal letter from Secretary Taft: "I very much enjoyed my trip to Worcester and much appreciate the kindness shown me by the members of the Board of Trade who attended the magnificent banquet which you held in Mechanics Hall."

The Committee on Manufacturers were very active some months ago in endeavoring to secure the location here of the Fyrberg Arms Company, owned by Sears, Roebuck & Co., of Chicago. At one time the prospects were very favorable. The firm finally decided, however, to locate in Meriden, Ct. The commit-

tee and the Board of Trade have the satisfaction of knowing that everything possible was done to attract them to Worcester. An invitation was sent the firm signed personally by every director of the Board, and also a separate letter signed by the prominent men of the city and employers of labor aggregating 15,000 people. The Committee on Publication have continued the Worcester Magazine without interruption, the work now being done under the supervision and editorship of the Secretary. Its style has been changed somewhat and, to my mind, improved. Another good thing about it at present is the fact that it is self-supporting; thanks to a little more generous advertising patronage.

The Committee on Membership, during the past two months at least, did most excellent work, with the result of adding seventy-eight members during the year.

On the other hand, our losses by death and withdrawal were quite heavy: twenty-seven members having resigned and seven died. It leaves us with a net gain, therefore, of forty-four members, and a total of 568; the largest enrollment in the Board of Trade history. This is well on toward the thousand mark, which I believe the Board should set for itself.

Our deaths included R. James Tatman, one of the directors and one of the most earnest workers in the Board ever since its organization. Flowers were sent and the funeral attended by a committee of the directors. The others were Philip W. Moen, Harlan P. Duncan, John Rivard, John P. K. Otis, Lucius E. Eldred, and William H. Bartlett.

Besides the deaths of our members, two others died who have always been more or less identified with us: Senator George F. Hoar and George N. Morse. The Senator's funeral was attended by a committee of directors. Mr. Morse had always done a great deal for the Board of Trade by the organization and as conductor of the Board of Trade Glee Club since its inception. Not only his associates, but the Board of Trade itself will miss him.

It was found early in the year that sufficient interest was not shown in the Export Sheet to warrant its issuance again at that time. It was rightly felt that if the manufacturers of the city, who were the ones that would be directly benefited, did not care to assume the slight individual cost, the Board of Trade did not care to do the large amount of necessary work.

During the year the Board of Trade has been the subject of a little criticism by one of the local papers for some unaccountable reason. It is not exactly pleasant to those who are striving and working with but one purpose in view, the welfare and upbuilding of the Board of Trade, which stands for one thing and one thing only, the best interests of Worcester. It is so easy for someone who does not know what he is talking about to say that we are actuated by selfish motives and that we are only here for what there is in it for us. Such men cannot realize there is such a thing in a man's makeup as public spirit. The records, books and actions of the Board of Trade are wide open to the members or to the public.

In closing this year of service, and my term as your President, I desire to thank the officers, directors, and members for their uniform courtesy and cooperation.

The following is the report of Secretary H. M. Sawyer:

Mr. President and Members of the Worcester Board of Trade: To-night marks the close of another year of Board of Trade work. Although your Secretary has been connected with the organization less than a year, it is long enough to know there is a wide field for work that will bring results—good results for this growing city. What can be done by the Board of Trade is told in a brief statement overheard at the annual banquet recently: "If these men should unite on any proposition and endorse any movement, defeat would be impossible."

The detailed work that has been done is contained in committee reports, and it is not for your Secretary to reivew it except in a general way. In membership and finance the Board has had no

more prosperous year. The social feature of the organization reached its highest mark, the Board having the honor of entertaining one of the most distinguished figures in national life. The season was also marked by a series of exceptionally interesting practical talks.

It is generally believed the business pulse of the city beats much stronger and the outlook for the coming two or three years is exceptionally promising. The metal manufacturers and builders give the most encouraging reports, and the general tone of financial and trade publications throughout the country is optimistic. It is a matter of regret that Worcester exporters did not follow up the good resulting from the circulation of the Export Sheet, issued by the Board of Trade. It gave the city and the Board of Trade wide advertising, brought business from foreign countries and cost the exporter very little to advertise his goods and the city. The Worcester Magazine, another means of advertising Worcester, has been placed on a paying basis. It has brought the city and Board of Trade to the attention of many persons and business concerns throughout the country.

In the line of suggestions, a new building—a Board of Trade home—should not be lost sight of. Agitation should be kept up along these lines. There is a decided need of a neat, illustrated booklet, showing the advantages and principal industries of the city, and such statistics as are in keeping with a publication of that nature. The Board of Trade should be a headquarters of statistics pertaining to manufacturing and industrial interests. The collection and filing of these should be a feature of Board of Trade work. The Board should not hesitate to take part in agitation of municipal affairs, where the interests of the public in general are concerned. There are business propositions originating in City Hall which can properly be taken up by this Board.

There is a widespread, popular impression that the sole purpose of a voluntary, public service association such as the Board of Trade is to secure additional industrial enterprises for the city. While this is undoubtedly an important function, it is by no means the most important. Of the majority of propositions from floating industries that are brought up to the Board of Trade, nine-tenths of them are from bonus seekers or professional promoters who have nothing to offer that is worth having. Worcester does not offer a bonus either of cash or land or exemption from taxes for new enterprises, but does provide the best skilled labor and sufficient advantages for doing a successful manufacturing business. Good banking facilities, superior transportation, and most important of all, high class skilled labor, so essential to the metal trades, are Worcester's bonuses.

While offering all encouragement to legitimate enterprises, little attention should be paid to these footless concerns that want money and offer nothing tangible in return. The Board of Trade would be doing a more creditable work if it would make the surrounding local conditions more beneficial to industries already located here, than trying to attract the professional promoter. To extend a helping hand to the small, needy industries of our own city, is far more creditable. There comes to every business man, at least once, the need of financial assistance or encouragement from his neighbor. This is where the Board of Trade should make itself felt. A manufacturer who has to be hired to locate in this city, is not as a rule worth the price. An offer of permanent advantages and not temporary financial inducement, is what counts. The only bonus a legitimate manufacturer cares for is good transportation facilities, cheap fuel and water, low taxes, and accessible raw material. The Board of Trade is not a promoter. It has no capital. Missionary work in the interest of a legitimate proposition is the best it can do. There are legitimate concerns that are attracted to Worcester by reason of its superior advantages as a manufacturing city, but they do not need the services of the Board of Trade except in an advisory way. The Board would be doing its members bare justice if it would investigate these so-called bonus hunters and advise its members not to invest, rather than treating the propo-

sition indifferently. The Board would be in such a position that when it gives its stamp of approval or disapproval, there should be no question about future action in the matter.

How much better, instead of straining our eyes over the horizon in search of tramp industries floating derelict on the sea of commerce, would it not be for the Board to localize its search and concentrate its energies upon opportunities that lie at our very door. Within the past decade public attention has been directed to the improvement and development of the suburban districts adjoining Lake Quinsigamond. Plan after plan has been formulated and discussed with varying degrees of earnestness, both in the columns of the press and in meetings of the City Council. But somehow or other, not one of those plans lived long enough in the public eye to reach maturity. They all died early deaths, either from lack of intrinsic worth or from dearth of sustaining public interest.

However, the fact can hardly be controverted that the development of Lake Quinsigamond and its immediate surroundings would mean enormous gains to the business interests of Worcester. The lake might be made the most attractive water park in this section of New England, bringing here each summer thousands of pleasure seekers. The lake district is unquestionably the greatest asset in the possession of the city of Worcester. Other sections of the State have been benefited largely by the beautifying and development of their local public resorts, through the intervention of the State. Worcester has a right to expect some share of consideration at the hands of the Commonwealth, and that recognition would be forthcoming in the course of time if a movement were begun for the conversion of Lake Quinsigamond into a State reservation, making it, of necessity, a part of the Metropolitan Park System. During the past few years the State commission has expended $7,500,000 in improvements as State property of places of popular resort like Revere Beach, Nantasket Beach, Quincy and Winthrop Beaches, the shores of the Charles, the Mystic, and the Neponset Rivers, Blue Hill, Middlesex Fells, and various hills, brooks and gorges. Then there is a complete boulevard system along the sea front from Boston to Newburyport. As a mountain park, Mount Wachusett has been taken by the State. The suggestion has also been made to include Mount Tom in the list of State reservations. Of the various beauty spots, containing more than 10,000 acres, which the State has adopted, not one of them possesses more attractive features or stronger claims to recognition as a public park than Lake Quinsigamond. The construction of a suspension bridge and of a boulevard say 100 feet wide around the lake, would lead to the expansion of the lake as a summer resort, and inevitably bring into the city a large influx of visitors. Both these improvements, if done by the State, would be supplemented by the city in carrying out that most important work, the widening of Shrewsbury Street. Here is rich food for discussion by our members.

Another most important subject which might very properly occupy the attention of the Board of Trade, is the feasibility of a Worcester industrial exhibition. It can truthfully be said that within the bounds of Worcester lie a wealth of mechanical genius and an endowment of mechanical ancestry of which our city might well be proud. Some of the greatest industries of the world had their birth in this locality. Whitney's cotton gin; Howe's sewing machines; Wheelock's engine; Blanchard's irregular form lathe; Bigelow's spread and carpet loom; Whittemore's card clothing machinery; the power looms of the Cromptons and the Knowleses; Washburn's wire drawing machinery, which has been so magnificently developed by successive generations of Worcester mechanics; Hawes' envelope machine, and many others of world-wide fame,—all form a nucleus about which might be crystallized a great practical scheme for an industrial exhibition which would work wonders as a world advertisement for this city.

Worcester has been heretofore too diffident in this respect. Too long has she hidden her light under the prover-

bial bushel. It is time she withdrew it from the shelter and placed it upon the mountain top of pardonable municipal pride. Think of her 1100 distinct manufacturing plants turning out almost every conceivable form of machine appliances. Think of her 25,000 mechanics earning more than $13,000,000 every year. Think of her savings in local banks equal to $375 for every man, woman and child in the city. This scheme of a Worcester industrial exposition if begun now and taken hold of enthusiastically by the members of the Board of Trade, might easily become an accomplished fact within five years. All the magnificent supremacy Worcester has attained has been won despite the most discouraging conditions of geographical location. If at first blush the spectacle of a city of 135,000 people planning an industrial exhibition should seem presumptuous, we can answer the doubters with some strong statistics. The figures which your President quoted at the recent banquet make a marvelous showing, and give Worcester a strong vantage point from which to work along the lines of an exhibition as suggested. Of the great expositions within the last ten years, all of them have been handicapped by the absence of a sufficiently large population within a reasonably small radius to draw from. While Worcester does not aspire to a World's Fair, yet a New England industrial exposition could be made a financial success if the argument used in connection with the greater expositions with regard to attendance is an important factor. Within an hour's ride, Worcester can come in contact with more than 3,000,000 people. This can be said of no other city in this country except New York. And these people are the most active, energetic and prosperous in the world. They would fully appreciate and patronize an exhibition of New England industries.

The idea is a big one. It is big also with magnificent promise of possibilities for the city. It would not be easy for any man to forecast the amount of permanent business increase such an exhibition would bring to Worcester. It would be the greatest advertising project the city could ever engage in. To use the phrase of the street, "Worcester has the goods," and need not be ashamed of her display. Here is an undertaking well worthy the best thought and honest energy of Worcester's men of progress and enterprise. All that is needed is a leader.

NEW UNION STATION PROPOSITION.

A DECISION having been reached in the matter of the new Union Station for Worcester to the extent of determining that there is to be a new site and a new station, the question as to what class of station is to be furnished seems one of very great importance to Worcester citizens. It is one that comes home to a greater number of them than would be the case with the designing of any other public building, because it is used more generally by themselves and their friends.

Railway stations the world over can be divided into two classes: one covering those having their waiting rooms, ticket offices and other passenger conveniences on a level with the track; the other including those with waiting rooms on a different level. In the former will be found nearly all important terminals of this country, such as St. Louis, Boston, New York, Jersey City, and the most important of all, one soon to be erected at Washington, D. C., designated by its projectors "the world's model."

Class two, for obvious reasons, is seldom, if ever, adopted unless conditions make it impossible to do otherwise, the question of the safety of passengers having to take precedence of their convenience. It is mostly on through lines that this class of station is established. Yet not all cities thus situated have this class of depot. Some have solved the problem in a way to conserve both safety and comfort of passengers, a notable instance being Providence, R. I., also

Springfield and Brockton, this State, and Rochester, New York State.

Worcester has been favored for about thirty years in having a station as convenient, as regards access to trains, as any terminal station, although situated on a through line. It would seem to be a matter of some concern to know whether, after the tracks are raised twelve feet or more above the surrounding streets, the same convenient arrangement can be preserved, in conjunction with all needed safeguards for passengers. About three years ago the railroads and city practically agreed to retain the present station, the points of difference between them being based on the question of alterations needed to adapt it to the changed conditions consequent upon separation of grades. Interest was shown by many prominent citizens. A committee of the Board of Trade took an active part, and conferences were held by it with city officials for the purpose of protecting the city's interest by seeing to it that all changes should be of a character satisfactory, as far as possible, to their fellow citizens and the general traveling public, also to have them made upon a scale great enough to meet future needs as far as such could be anticipated. Nothing of the kind has been attempted since a selection has been made of a new site, although it is plain to be seen that conditions are greatly changed, and conclusions arrived at, with the old depot and the other location as a subject of thought, should not be considered as fitting and final now by any one having the city interests at heart. Considering the new site in relation to its fitness to the railroad business generally, both local and through traffic, it stands forth as being unsurpassable in its adaptability and uniqueness, therefore independent treatment should be accorded it, to the end that Worcester shall secure the best possible depot obtainable.

The approximate estimate of the number of passengers passing to and from trains in the present station at the present time, in the course of twelve months, gives an enormous aggregate of over two millions, computations being based on figures received from one of the southern-bound lines. The number will be increased from year to year as the city grows. All have a direct interest in the depot as far as it affects their convenience and comfort. In the light of these facts and figures, is it not plain that fully as much consideration is due the subject at this time as at any other period of the past?

There should be no haste now at the expense of what is right. Take all the time and all the steps necessary to make the city secure against any after regrets.

The new Washington terminal referred to above is to cost over $5,000,000. Two paragraphs of the descriptive matter stand prominently forth as indicating the principle underlying its design—its working principle so to speak. One is the statement that passengers pass into the depot from the sidewalk, and into waiting rooms and numerous other rooms through and to their trains, without encountering a single step.

In answer to a letter of inquiry to the architects of this depot, written to ascertain whether this arrangement was the result of special design, or because the surrounding street grades favored it or left no alternative, brought forth a reply to the effect that the plaza upon which the depot fronts was established at the proposed level at a very great expense. A fill of thirty-five feet is required above the present level of the ground at some places, and every effort was made to have the tracks upon the same level as the waiting rooms and the plaza. The other paragraph reads as follows: "Experience has demonstrated that the average traveler prefers to wait for his train at the concourse and not in a waiting room. He gets as near as he can to the gates and watches there for his train."

Since this is a fact beyond question, and since it is designed in the "world's model" to meet the wants of travelers as thus portrayed, Worcester can make no mistake if it follows the same lines in its new station.

Two things are essential in all cases—safe conditions for passengers going to and coming from their trains, and a convenient and satisfactory means of reaching the track level from the street so

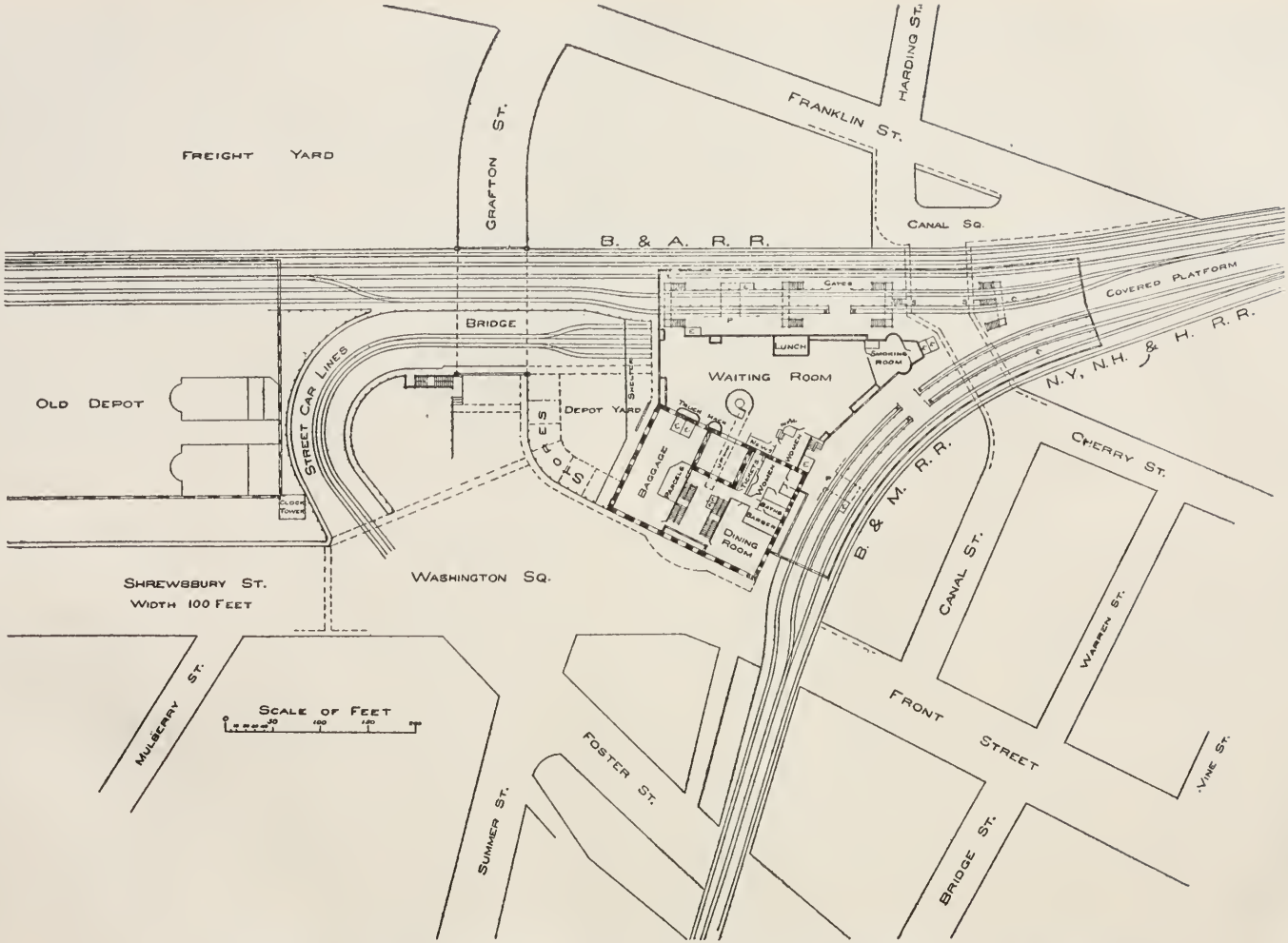
that no steps need be encountered in passing into the depot. The plan which accompanies this article shows that neither essential is impossible at the new site. By this plan no reduction is made in the area of Washington Square, nor in its lines, nor in the lines of Grafton Street from those already established before the Grade Crossing Commission. The tracks are supposed to be elevated twelve feet from their present level at Grafton Street, and the viaduct lines to be on the same level as the other lines through the depot. All markings of rooms and walls within the west line of the square, except the double set of steps in the centre of the main building, indicate the arrangement at the track level. The plan contemplates the erection of a large and substantial building fronting the square—175 feet wide and 125 feet in depth, and a height proportionate to its other dimensions—to be called "the Union Station." Joined to this, in the rear, is a one-story building containing the main waiting room and its attributes, such as a smoking room, lunch room, telegraph office, news stand, telephone booth, etc.

Joining this on the south and on the west are the train sheds proper, having their outer walls so placed that all freight trains pass on the outside, passenger trains only entering the enclosure. The roof of these train sheds is supposed to be independent of that covering the waiting room, although resting upon the dividing walls. Such form of roof construction should be adopted as would best serve the purposes of ventilation. This arrangement of separate roofs ensures a satisfactory lighting of the large waiting room and ticket lobby. All floors are level, and that at the southwesterly end is expected to extend in the form of a covered platform to Green Street, there to connect with the street by stairs or inclined plane, or both.

On the east side of these buildings, level with the tracks, is an open yard, containing about 20,000 square feet of surface, connected to the square by a wide approach of easy grade passing over Grafton Street on a bridge. This bridge is the same as designed for tracks under the plan of altering the present station. The approach, so called, takes the place of those tracks which under the new plan would be diverted north over the viaduct. This driveway or approach to the yard is intended to be as wide as Front Street. Two sidewalks are shown, also two lines of street cars. This figures 4½ per cent. grade along a centre line between the tracks. Between the east line of the main building and this bridge, beneath the yard could be grouped a number of small stores having glass and iron fronts, more or less ornamental. The elevation of the yard above the street would be sufficient to allow of a watertight and safe form of roof construction to maintain any load that will ever come upon it.

When this plot is thus transformed, the assessed valuation will nearly equal that which it displaces, and to a considerable extent become revenue producing. The main entrance is shown centrally located in the main building at the street level. This is the only section of the ground floor that will be needed strictly for depot purposes. As drawn, it is of most liberal proportions, likewise the hall and stairways to which it leads. At the rear of the hall two passenger elevators are shown, and the hall is extended in the form of an inclined plane ten feet wide, which connects it to the waiting room, as shown through the medium of a spiral platform resembling the thread of a screw. The grade of this incline is the same as Chatham Street, viz.: 12 per cent. on the straight stretch and along the outer border of the turn. It is considerably steeper at the inner turn, but this grade being on the right hand descending, does not impair the practicability of the scheme.

Express companies could be furnished quarters in the room west of the main entrance, the driveway adjoining favoring the receiving and delivery of goods. Connection with the upper level could be made by elevators at the rear, and chutes could be used. The other room could be rented for such store purposes as seemed best suited to the interest of travelers.



NEW FLOOR PLAN FOR UNION STATION SHOWING WAITING ROOM AND TRACKS ON SAME GRADE.

Drawn by T. J. Sawyer.

The second floor, which is on a level with the tracks, would all be needed for station purposes, and some of the rooms above for transportation business, such as offices for the operating forces of the various lines, quarters for trainmen's associations, sleeping rooms, baths, etc., for employees. Tenants could be depended upon to fill any number of floors deemed advisable to add to make the building of correct proportions. The baggage room on the second floor is shown abutting the yard, which is also on the level of the tracks, as before stated. This room is double the area of the one in use at present, with unlimited room at the lower level for storage.

Two elevators are shown within this room, which connect with the lower level. By this means baggage is to be transferred from beneath the waiting room to convenient points near the heads of trains, where other elevators are placed. In this way a conflict of passengers and trucks is avoided. Passageways beneath tracks are indicated at points marked P at the east end of the Boston & Albany system, and at the north end of the viaduct lines, through which baggage can be sent direct to the outer platforms, where elevators are shown. Owing to the location of Canal Street, at the western extremity of the station, this arrangement can not be applied. A runway overhead connecting with the nearest elevator, would here serve the same purpose.

In place of divided waiting rooms modern practice provides for one general waiting room, with smaller retiring rooms for women, and smoking rooms for men. The general waiting room here shown is made on a scale somewhat commensurate with the expected growth of the city and development of railroad traffic. It contains about 20,000 square feet of floor surface. The smoking room has about 1600 square feet, the ticket lobby 1800, and the women's department 2000 square feet, the aggregate being practically two and one-half times the combined area of the present waiting rooms and corridor of the present station. These embrace all the passenger conveniences that are made comfortable in winter weather. From this large waiting room both systems of tracks are in view, also the several lines of street cars. This arrangement for the New England climate offers advantages over the ordinary terminal concourse, as trains and street cars can be watched for by travelers while under the protection of the enclosure. The ticket office is open to the women's room, the baggage room opens into the waiting room, but checking is done in the ticket lobby. The telegraph offices and an ample sized lunch room are placed within the waiting room, but near the through lines of the Boston & Albany division. A dining room of liberal size is shown on this level, at the front, where it has more cleanly surroundings. Near this is shown a most convenient adjunct to any large depot, viz., a barber shop, with baths combined. This and the dining room, on account of their locations, can draw patronage from the street as well as from the traveling public. The smoking room overlooks both systems of tracks, and has doors opening upon each. Bay windows are possible here to command a better view of the roadbeds.

A section of the yard is shown roofed over. This roof is sufficient to cover the length of a street car, and extends to the street line, thus protecting carriage passengers, baggage men and others.

For the better understanding of the above, and for the purpose of proving its practical worth, a detailed description of the interior arrangement of the "world's model" is here introduced. It reads as follows: "Around the waiting room (called a hall) are grouped the dining room, lunch room, telephone, telegraph and parcel rooms, smoking room and women's waiting room, while the ticket office and baggage room are on opposite sides of the lobby, 50 feet wide, opening directly from the waiting room. While virtually forming part of the waiting room, the ticket and baggage lobby serves also as a passageway for entrance to and exit from the carriage porch.

"This close grouping of baggage, tickets and carraige porch is an unusual arrangement in larger American cities, and it will be convenient in operation, permitting the belated passenger to buy

tickets and check baggage with the utmost despatch."

If, in place of a "carriage porch," "street entrance" was substituted, *this description would fit as well to the plan here presented as though it was intended for it.* A carriage porch is not lacking in this plan, and is no less conveniently situated to the ticket office.

Referring to the plan, it will be seen that the method adopted for meeting the demand for absolute security to passengers is to handle all local trains of the three systems on the inner lines of tracks, and to treat them as terminals are generally treated. These lines are not continuous through the station, but end each one within twelve or fifteen feet of a central point, thus giving a passageway clear of tracks twenty-five or thirty feet wide. This platform on the viaduct lines extends through to the third, or outer platform, along which run the through line tracks, and are fenced off, as shown, and passage to and from trains on the middle line of tracks is through gates opening from the passageway referred to. The same treatment is applied to the Boston & Albany division, but on account of the location of two through lines side by side, provision is made for safety by installing subways leading from the inner platform to the outer platform, to be used when the passage across is blocked. The gates shown in the plan are to be under the care of a trustworthy employee, who will close the passage only when necessary. Not more than one-ninth of all the passengers using this station will be thus incommoded. Four sets of subways are shown at points convenient for passengers; those at the west end are connected with Canal Street below by a supplementary set of steps at points marked S. This gives a short route into the station for passengers coming from the south side, through Harding Street and through Trumbull Square. Much time would be saved in transportation of the mail if its receipt and delivery could be arranged for at this point. The method here employed of joining Harding and Canal Streets through the medium of a small square is intended to meet the demands of residents of wards southerly from the depot. It gives a convenient entrance, and one that can be made attractive to some extent. The small triangular strip bordering Franklin Street could be set out with trees and shrubs, and supplied with seats, and the retaining wall along this square might be laid up with some regard to appearances and be surmounted with ornamental railing.

From what has gone before, it is plain to be seen that the enlarged accommodations have been supplied with ample means of entrances and exits, and with all necessary means of reaching the upper level from the surrounding streets. It is also plain that street car lines within the square are not interfered with. But little, if any, deflection is required in those now running to the depot to connect them to the proposed approach.

This completes the description of the plan. (*Can it be doubted that there is at least one way by which waiting rooms and their attributes can be made to go up with the tracks, and yet require the abandonment of nothing essential to convenience and safety of passengers?*)

This plan is not put forth as being the only possible example of a track-level depot for this location. Many of its details are susceptible of very different treatment under the guidance of experts in such work. It will serve a good purpose, however, should it awaken interest at this time in promoting the development of other plans and defeat any scheme of depot for this city constructed on the two-level principle. It signifies but little to point to other cities and, in answer to a criticism of open, icy, windswept platforms, to say it is done at those places, or, when objection is made to the use of stairways in stations where such multitudes have to make use of them, as in this city, on the score of their inconvenience and danger because passengers are so generally encumbered with baggage; and on the still more humane ground that they are a direct hardship to the crippled, aged and infirm; to name some one or more places and say "their depot is built that way, we are on through lines the same as that place, therefore it must be done here as it was done there." Worcester has too

many practical and successful business men to permit it to take this helpless attitude. When awakened to the necessity of action in any matter affecting the city's interest, they proceed to work and aim to get the best. They do not seek to follow the lead of other places, but master the conditions surrounding the problems here at home. They are for the right thing regardless.

Reference has been made to the work of citizens and Board of Trade members when plans were formed for altering the present station. Their interest was awakened because the Boston & Albany R. R. Co. proposed to retain this depot without enlarging any of the passenger conveniences. It seemed not to occur to this company that our city is continually growing, and the present waiting rooms and baggage rooms are none too large now. Plans have been recently exhibited for a new station on the new site, which were prepared under the direction of the same company. A picture of the building was shown in the April number of this Magazine. Detail plans were lacking. Description previously made discloses the fact that the railroad company has not yet been converted to the faith of Worcester citizens respecting the growth of their city. It furnishes one large waiting room, containing 6720 square feet of floor surface. This exceeds by only 500 feet the combined area of the present ones. Practically, it gives no increase, as clear passageways must be made between the main entrance on the east to corridors on the south and west. At the most, the measure of increase is represented by the men's smoking room and women's retiring room.

One manifest error has appeared in every description of this plan. It is found in the statement that this station has a frontage on the square of 800 feet. The total length of the street line between the viaduct and the Boston & Albany roadbed at Grafton Street does not exceed 450 feet. Inasmuch as this station is to set 100 feet back from this line, it is plain that figures have become mixed. It is probable that 300 feet would be nearer correct.

A good and all-sufficient reason for having such questions as this considered by the Board of Trade and other associations of citizens is to be found in the fact that city officials, in whose keeping such affairs are placed, labor under restraint. The cry economize, make lower tax rates, reduce the debt, etc., is ever ringing in their ears. While their inclination is to do what is best for the city's interest in all things, inferior schemes are sometimes consented to, in deference to this popular cry and for want of assurance that they would be upheld if, in working for what is unmistakably right and best, they should contract increased financial obligations.

No estimates have been obtained of the probable cost of a station constructed after this plan. Some items of cost are common to both, notably all that are incident to the walling, filling and raising the tracks of both systems, and installing of heating, ventilating and lighting plants. The cost of that part of the structure called in the notes "train sheds" could very reasonably be omitted for purposes of comparison, as its absence in the railroad plan constitutes one of the greatest defects of the same. The city should insist that their platforms be enclosed, no less effectually than is shown in this plan, if fate should decree its adoption. Deducting the cost of stores placed beneath the yard, and of such portion of the main building as would be sublet, which become revenue producing, and therefore no part of the depot investment, the resultant figures would probably show no very alarming difference.

There are some matters in which the question of cheapness is not the all-important one.

THOS. J. SAWYER.

BOARD OF TRADE THIRTIETH ANNIVERSARY.

THE Worcester Board of Trade banquet in Mechanics Hall Saturday night, April 1, marked the thirtieth anniversary of the birth of the organization, and brought together 600 manufacturing, business and professional men—the sinew of the industrial life of the Heart of the Commonwealth—the flower of the city's commercial life. It was the most representative gathering in the social life of Worcester, and the occasion in every detail was a distinct success.

The guest of honor was Hon. William H. Taft, secretary of war, who was entertained during his stay by President Harry W. Goddard of the Board of Trade, and no person in public life was given a more enthusiastic welcome than that which greeted Secretary Taft as he arose to speak.

The arrangement of tables by Brigham, the caterer, and the floral decorations by Lange, together with the hanging and draperies by Johnson, Carpenter & Co., made Mechanics Hall a picture to look upon. The various sized tables enabled the members and their guests to sit in small groups, so that the hall more resembled a score or more of distinct dinner parties than the regulation banquet, the directors being on the platform with the head table guests. The head table was constructed on an elevation directly in front of the stage, with accommodations for twenty-eight seats. There were at this table the following:

President Harry W. Goddard, of Worcester Board of Trade, and Hon. William H. Taft, secretary of war, guest of honor.

Mr. George F. Booth, chairman committee on meeting and reception, and Lieut.-Gov. Curtis Guild, Jr., representing the Commonwealth.

Hon. William A. Lytle, member of committee on meetings and receptions, and Hon. Samuel L. Powers of Newton.

Mr. W. W. Johnson, of committee on meetings and receptions, and Hon. Charles G. Washburn.

Mr. James Draper, of committee on meetings and receptions, and Rev. Dr. Willard Scott, of Piedmont Church.

Gen. Robert H. Chamberlain, of committee on meetings and receptions, and Rev. D. Frank Crane, of Union Church.

Mr. Freeman Brown, of committee on meetings and receptions, and Hon. Carroll D. Wright, president of Clark College.

Mr. Henry E. Townsend, of committee on meetings and receptions, and Mayor Walter H. Blodget of Worcester.

Ex-president Rufus Bennett Fowler, of Worcester Board of Trade, and Dr. G. Stanley Hall of Clark University.

Ex-president Irving E. Comins and Arthur M. Stone of Worcester Board of Trade.

Mr. Charles F. Marble, of committee on meetings and receptions, and ex-President C. Henry Hutchins of Worcester Board of Trade.

Mr. Henry F. Harris, former director of Worcester Board of Trade, and District Attorney George S. Taft.

The dinner was at 6.30 o'clock, and the speaking part of the programme was inaugurated by President Goddard, who spoke briefly and as follows:

"The character of the membership of this board before me, and the honored list of presidents, previous to the present incumbent, tell to you what the Board of Trade is and what it stands for. Such men as have filled the president's chair, Philip L. Moen, Charles H. Hutchins, Joseph H. Walker, Arthur M. Stone, Charles G. Reed, Irving E. Comins, Rufus B. Fowler and Walter H. Blodget, do not stand for selfish motives or graft.

"But, gentlemen, you did not come here to-night to hear me talk, but I do want to give you a few figures and comparisons that I believe will not only surprise but astonish you. They relate to our city, of which we are so justly proud, and will give you something to think about, for I don't believe you ever realized how important a position the old Heart of the Commonwealth occupies. They will show us the possibilities of the

city, more especially as a trading centre.

"If we continue to grow in the next twenty-five years as we have in the past, more than doubling our population in that time, and I see no reason why we should not, Worcester can never be considered simply a way-station between Boston and New York. Let me tell you, gentlemen, that within fifty miles of Worcester there is a larger population than in any similar radius in this country, except New York. I repeat the statement—Worcester is the centre of the most populous fifty-mile circle, with one exception, in this country. We don't pretend to be in New York's class; second place is good enough for us.

"Let me give you the figures. They are made up from the 1900 census.

"Within fifty miles of Worcester there are 3,030,477 people, divided as follows:

"New Hampshire, 72,865; Connecticut, 206,629; Rhode Island, 381,722; Massachusetts, 2,369,261. Within fifty miles of Worcester, 3,030,477; within fifty miles of Boston, 2,849,686; within fifty miles of Philadelphia, 2,545,111; within fifty miles of Chicago, 2,167,402; within fifty miles of St. Louis, 1,011,555.

"Thus Worcester beats its nearest competitor, Boston, by 180,000 people, and for all business purposes this community stands second in population in the whole country. We have been in the habit of thinking that St. Louis was quite a place, but right here in Worcester you have three times the people to serve in the same distance.

"Let us look a little farther. More than one-thirtieth of the entire population of the United States is within fifty miles of Worcester. More than one-twentieth of the wealth of the United States is within fifty miles of Worcester. Beside this, look at the State herself—grand old Massachusetts. The average earnings of the American people, by a recent calculation, are 40 cents per day, but the average earnings of the men, women and children of Massachusetts are 73 cents per day, or 80% more than the average of the country at large. This means $250,000,000 extra for Massachusetts every year. One-fifth of the savings of the people of the United States is in Massachusetts savings and co-operative banks to the credit of Massachusetts depositors.

"I could go on with these comparisons indefinitely, but I have said enough to convince you, I believe, that Massachusetts leads the country, and Worcester is the centre of Massachusetts."

Mayor Blodget spoke for the city, Lieutenant-governor Guild for the Commonwealth. Congressman Powers told of the industrial growth of New England, and also the shifting of industries to the West, and Dr. Willard Scott told of some of the needs of Worcester. The interest centered in the speech of Secretary Taft, who told of conditions in the Philippines. His address follows:

"Mr. Toastmaster and Gentlemen of the Board of Trade: I am sincerely glad to be with you, and thank you for your cordial welcome. I deeply regret that I was obliged, because of illness, to break an engagement to come here a year ago in response to the invitation tendered by your association through Senator George F. Hoar. It was my pleasure and honor to know Senator Hoar, and to respect him, as millions of his countrymen did, and to regard him as a type of the highest American statesman. It will always be a source of the deepest regret that I was not able to come last year, when he was in life, to pay a tribute to the part which he took in the history of his country.

"It was my fortune to differ with him on the issue which occupied much of his later days, the Philippine Islands, but that made his memory only brighter, because, if I understand the opinion and the temper of the people of Massachusetts, they did not agree with him in the views which he had; but they trusted and honored him as a statesman, to the point that they were glad to send him back to the Senate, because they knew he was carrying out his conscientious belief that he took from his revolutionary ancestors, and which he believed ought to be at the foundation of this government.

"Another regret to me is that I was not able to come last year, that then a dear classmate of mine and an honored

citizen of yours, Philip Washburn Moen, was in life, able, generous, masterful, and it seemed too bad that in his prime he should be taken away. Peace to his ashes.

"I visited Worcester County in the first year of my life, and ever after that each year of my life until I was twenty-one. I am familiar with all the towns in and about Worcester, but chiefly with Millbury. Millbury has some ground of complaint with Worcester. And it is a little difficult for me to eliminate that feeling of resentment because I learned to swim in the Blackstone River, and I have caught fish there. That indicates how old I am, for I must have attained considerable age if that was possible in my boyhood.

"Yes, citizens of Worcester, you have a great city. I did not know it was quite so large as the chairman has demonstrated it to be, but I have known and felt its growth in industries, art museums, universities, colleges, in beautiful parks, and roads and residences. But, my dear friends of Worcester, the Blackstone River remains.

"I had always supposed the river was called the Blackstone because the stones looked black in my day, but I am now advised it was named after William Blackstone.

"Now I am going to talk to you for a little while about the Philippine Islands. I am going to assume that the last election settled the fact that we have the Philippines indefinitely, for the purpose of bringing about prosperity in the islands and preparing the people for self-government. It is a matter of useless conjecture and imagination to discuss what will happen a generation hence, when every one familiar with the conditions of the islands must know that not for a generation may we expect the people of those islands to receive the trust and burden of complete self-government.

"The American people are practical people. They do practical things, and when the path is open for them to move, they move on, and have no time to listen to any complaints. Now I shall differ much with them, doubtless, as to the righteousness of our being there, and as to the wisdom of our continuing there, but I am not going to use up time in discussing that issue, because if there was one issue settled at the last election, it is this issue. Therefore, I invite you to the consideration of the problems we have on our hands.

"Now that's a colonial problem, and when we reach our colonial problems, our English brethren step forward and suggest to us how they should be settled. Certainly the colonial history of Great Britain entitles the people of that country to say how colonies should be founded and carried on. But our English brethren are not always given to make a fine discrimination as to the difference in the problems to be solved. In his tropical colonies, the Britisher had to deal with Mohammedans and Hindus, who, he says, are not capable of self-government, and never will be. And he thinks our situation is exactly the same.

"Now, on the threshold of the proposition, we must differ with him. We have 7,000,000 of Christian Malays, the only Christian Malays in the world, the only Oriental Christians there are. We have a people for 250 years under Christian auspices, and who have been looking to Europe and America for ideals.

"We have been criticised for encouraging the people to think that they would get self-government right away. We did not have to give the people that impression; they had it before we got there. We have been criticised for giving them education that would incite them to cessation from our authority. There are among the civilized tribes perhaps twelve or fifteen different dialects, and one who understands one of these dialects can not understand another. When we concluded that these people ought to be taught a language they all might understand, and for their benefit, we found that 7% spoke Spanish. And we did not think it desirable to learn that language, so we opened English schools. The last census showed 263,000 Filipino pupils attending the schools and reading in English. They are not under any compulsory system. That number represents about 17 % of the youths of school age in the islands. They have not been taken there by law. Their parents de-

sired them to go, and they desired to. And I ask whether a desire for knowledge deserves encouragement, and for hoping that the people have something in them upon which they may build.

"Unfortunately we have not the money to give them the education we desire to. What they ought to have is not a university education, but an education of the manual training character. I am very fond of the Philippine people. I do not hope they will ever reach the capacity of the Anglo-Saxon. But their love of education, for self-government, and for popular assembly, sentiments which you don't find among Mohammedans, Chinese or Buddhists, all indicate that we are entering upon an experiment with a new people, and until it is a failure, I much mistake the American people if they are not in favor of our trying to give them free popular institutions.

"We are also criticised for having a great, expensive government over there, and we have. It is expensive for two reasons: first, it is more complicated than it might have been, because we wanted to make many offices so that the people could rub up against each other, and also because we had to have some Americans to hold these offices.

"Americans are expensive at home, and when they are thousands of miles away from home we have to add from 30 to 40 per cent. on their expenses. We have imported 1000 teachers, and have had to pay them even $1000 to $1800, and they will work there for years until we have educated Filipino teachers, who can afford to give their services for possibly one-third less than the American teachers. But in the meantime, we must employ so much American framework. As we go on and substitute the Filipinos for the American teachers, the cost will considerably decrease.

"We have spent a great deal of money for them. We have constructed two long roads and expensive harbor works. We began to build a road at an estimated cost of $75,000. We employed an engineer who was employed on a railroad in China, and if his estimates there were as far from what we found them in the Philippines, I can not hope for great dividends from the road. He said it would cost $75,000, and it has cost us $1,000,000. But the advantage of the road in bringing within reasonable distance to Manilla a climate where Americans can recuperate, and where the Filipino may go, and where the soldiers and civil servants may journey to for their health, has an advantage well worth $1,000,000, much above the estimate though it has proved to be.

"The thing that the islands need is a railroad. The last Congress passed an act whereby the railroads may be helped, the government guaranteeing 40 % for the construction. When 1000 miles of these railroads are constructed in the islands, they will make a change so great that the natives will hardly recognize their home.

"I am very hopeful for it, and there are indications in Washington that American capital is ready to undertake the risk, and I hope in five years that we shall have a system that will give the islands a chance.

"These people, 8,000,000 of them, have 120 miles of railroad in a territory 140,000 square miles. Is it any wonder that the islands have been backward, when even Algeria has eight times as many miles of road for half the population?

"I fancy that never before has the subject of the opium traffic and its suppression in the east been studied so much as by the governor of these islands. In every eastern country opium has played a part, and our English brethren furnish no example that we would care to follow. India, the Straits Settlements, and Chinese towns controlled by Englishmen, derive an income from farming out of the opium privilege, and every decade the traffic increases by leaps and bounds. The only justification for the increase is that the use of the drug has become more and more general with the people.

"Now, as to labor in the islands. The Chinese are excluded, as they are in this country, and that does not meet the views of those who think the Chinese should be used to build up the islands. The English critics think we should let them in. But that depends upon what

we intend to do with the islands. If we let them in, we would have a Chinese population in ten or fifteen years that would own all the land, and do all the business, and except for the governing party would be the whole thing. The question is, "Do we desire to deprive the Filipinos of their own country?" For one, as long as we are responsible for those islands, we should continue the present policy of keeping them for the people. It is said that the Filipinos will not work. Well, nobody likes to work, and when you live in that country, you can lie on your back and have the food fall into your mouth from the trees, and thus you have no desire to furnish a motive for labor.

"One of your own citizens, Mr. Laffin, the superintendent of street railway here, went out to build a street railway of 33 miles in Manilla. They said to him that he could not get along with the labor there, but he has built those 33 miles of road with all the assiduity of a Massachusetts man, and he did it with Filipino laborers, cheaper than he could with American labor. What the laborer needs is training and education.

"They have constructed a schoolhouse near a quarry, a church, hired a teacher and a priest, and they made a cockpit, but they did not need to hire anybody for that. They have also hired a band, built a theatre and houses for workingmen, and in three months they had a colony of 1500 persons, 800 of them workmen, and the superintendent of that road said he never had better workmen.

"The resources of the island are chiefly agricultural, though there are mineral resources, gold and all other sorts, but until they strike a mine I shall not recommend any of you to invest your money in them. Sixty-five per cent. of the product of the island is manilla hemp. The cocoanut tree can be grown to bear in six years, and after that the real price is a Mexican dollar a tree. There are 200 trees in two and a half acres, and that tree will last 100 years. Then there are sugar, indigo, coffee and other industries."

Secretary Taft then spoke briefly on the necessity for tariff legislation between the United States and the Philippines, in which he made special reference to the bill introduced in the last Congress to reduce the tariff on articles coming into the United States from the islands, except sugar and tobacco, which pay 25% under the Dingley tariff. He told of the amount of sugar the United States consumes, 2,700,000 tons. The United States produces 900,000 tons, leaving 1,800,000 tons that have to be imported from somewhere, and of that 1,800,000 tons, 1,000,000 come from Cuba, with 80% duty under the Dingley tariff law, and the balance from elsewhere, at 100%.

In closing, he said: "As a matter of honor, we have to do as well by them as we do with Porto Rico, and we see that by opening our markets to them we give them a little business, which means a great deal to them and nothing to us. Should we hestitate to do them justice?

"I am very anxious to bring this home to the American people, in order that they may bring it home to their congressmen, and to set afire their congressmen, and have them understand that we want to give the Philippine Islands a square deal.

"We have organized a party of investigation, comprising twenty congressmen and ten senators, who are going for seventy days to visit the Philippine Islands."

Music for the occasion was furnished by J. N. Truda's Orchestra, which played during the reception from 6 to 6.30 in Washburn Hall, and during the dinner in Mechanics Hall. Singing was by the Board of Trade Glee Club of thirty voices, their numbers being well received, the club maintaining its splendid reputation for excellent singing.

The committee on meeting and reception had charge of the details of the banquet, and the faithful work of this committee produced the most satisfactory results.

From an original and artistic standpoint the menu card was a gem. Its cover represented the principal industries of Worcester, its symposium being done in half-tone by a unique interweaving of Worcester-made products on a half-tone plate.

THE WORCESTER MAGAZINE

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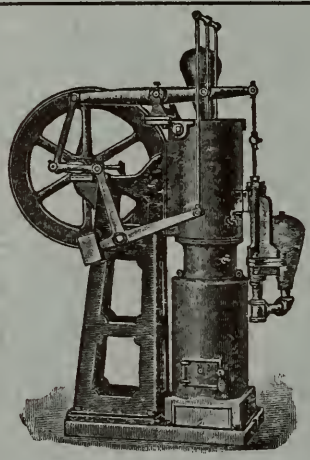

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WORCESTER NATURAL HISTORY SOCIETY.

The Worcester Magazine.

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This magazine is published by the Worcester Board of Trade. Its reading pages are devoted solely to municipal development, good citizenship and the business welfare of Worcester. Space in these pages is not for sale.

MAGAZINE AND MUNICIPAL COMMENT.

For Natural History Building

The agitation which Dr. W. H. Raymenton has started for a natural history building is but one step of many that should be taken for the development of Worcester along the lines of appropriate public and semi-public buildings. Worcester gained quite a bit of notice when the Natural History Society was organized more than fifty years ago, having for its promoters Dr. Edward Everett Hale, Dr. Merrick Bemis, Senator Hoar, Thomas Wentworth Higginson, Judge Francis H. Dewey, Albert Curtis, Hon. Stephen Salisbury, Hon. J. H. Walker, Thomas H. Dodge, H. H. Bigelow, and a score of others of equal prominence. The Society has existed in its State Street home for a number of years, and one of the features of summer life at the Lake up to within a few years has been the Natural History Camp. It is now proposed to re-open this camp for scientific study during the summer months, and the desire is to secure for Worcester a new building of the class of the Worcester Art Museum, Woman's Club and others. Mr. Thomas H. Dodge has made the Society this year a handsome contribution, and interest is being awakened among nature students along the lines as originally laid out. It is hoped that some public-spirited citizen will consider the movement, and that Worcester may have within a reasonable time another handsome building, devoted to the study of natural history.

For the Hoar Memorial Fund

The Trustees of the George F. Hoar Memorial Fund, of which Mr. Charles M. Thayer is treasurer, have got down to practical work, and fixed the time between May 29th and June 20th when subscriptions to the fund may be made. A list of places where subscriptions may be received has been prepared, and the attention of every person in Worcester will be called to the Memorial Fund. Mr. Thayer has sent to every manufacturing plant in Worcester announcement of what is desired, and all the public schools and other institutions of learning, various societies and clubs, in fact every organization, have received a direct communication relative to the fund. The appeal is:

To the Men, Women and Children of Worcester:

For fifty years George F. Hoar devoted his life to the welfare of the people of this country. Through all that period his serene courage, his honesty of purpose, his capacity for work, made him capable of representing effectively all those qualities which this free people cherish and admire.

Men of every creed and every nationality, from every occupation, the poor and the rich, have all benefited by his wisdom and by his goodness, and they should all be glad to unite in contributing to a fund to be used in erecting a statue in Worcester of their benefactor and friend.

Let the subscription list contain the name of every person in the city, each giving cheerfully, according to his means. Each subscriber will receive a certificate.

Walter H. Blodget, Stephen Salisbury, Thomas Griffin, Matthew J. Whittall, James Logan, Francis O. Dahlquist, A. George Bullock, Charles D. Hutchins, Philip J. O'Connell, Paul B. Morgan, John R. Thayer, Henry A. Marsh, Arthur P. Rugg, William E. Rice, Henry A. Bowman, Jacob L. Goding, John F. Jandron, David F. O'Connell, G. Stanley Hall, Napoleon P. Huot, Nathaniel Paine, Homer P. Lewis, Charles M. Thayer, Trustees of the George F. Hoar Memorial Fund.

Bonded Warehouse Secured

The united effort of the Board of Trade and importers of Worcester has secured for the city a bonded warehouse in connection with the port of entry. The new order of things goes into effect July 1, and the warehouse will be at 6 Barton Place.

The Treasury Department did not look kindly upon the proposition at the outset, making a point that the business did not warrant such warehouse. This argument was met by facts that could not be controverted, and after further consideration the department order was sent out. Worcester is an important inland port of entry, and during the past year there has been a decided increase in the business and the amount of import duties. The petition and figures sent the Treasury Department shows Worcester well up in the list of inland cities where imports are received direct. Captain C. H. Pinkham, collector of the Worcester port, is largely responsible for the government decision, assisting the Board of Trade in detail of the work of the office.

Accepts Second Term

In accepting the office of President of the Board of Trade for another year, the directors realize that Mr. Harry W. Goddard did so at a sacrifice of his private business. In these days of business activity one finds himself allied to many interests and it requires some sacrifice to take the leadership of a semi-public organization such as the Board of Trade. It is a position which requires considerable time and work, the details of which the general public never knows. Mr. Goddard served the Board last year well, and it was his honest intention to retire at the end of his term of office, because of his several business interests. Because of his careful, conservative policy, the Board of Directors insisted that he accept a second election, and it was after considerable consideration and strong pressure of both Board of Trade and outside interests that he allowed his name to be presented. He deserves the support of the Board of Trade membership in his work, for what he has done for the organization and the city has been done according to his best judgment as a business man—one who has made a success of his various interests.

Union Station Plans

The article in the May number of the Worcester Magazine dealing with the Union Station problem has attracted the attention of some of the engineers of Worcester and elsewhere. Mr. Pierce Anderson, of Burnham & Co., Chicago, who made the plans for the Washington terminal, which is supposed to be the most approved railroad terminal on the continent, has written Mr. T. J. Sawyer, author of the article, a lengthy letter congratulating him on his ideas, and making several important suggestions. He says he is interested in the article partly because of the possibilities of the problem, and partly because of the useful ammunition the writer was able to find in the Washington terminal, with which Mr. Anderson has considerable to do. In line of suggestions he thinks Worcester ought to do as was done in Washington—that is, treat the station and its approaches as one composition.

This means such modifications of neighboring streets as would bring a little order out of irregularity and provide a station with an appropriate and dignified setting. He says the plan shows that Worcester has ample space for a noble approach, and all needed is a little straightening and balancing here and there.

If some such scheme as he outlines could be carried out, Worcester would have a plan much like that at the great station at Dresden, Germany, where the plaza is flanked by elevated tracks on two sides, and would also have radial avenues entering the plaza in much the same way as at Washington. In Washington, to create this semi-circular plaza, meant pretty radical tampering with property lines as well as great changes of elevation, and the cost of the plaza alone, aside from the station and its approaches, will amount to more than one and one-half million dollars. In Worcester the creation of a similar plaza is much simpler, and is well worth striving for. As Governor Douglas has signed the Worcester Union Station bill, it is now a matter of detail before the Grade Crossing Commission, and Worcester should not let the matter go by default. It deserves the best it can get, and can get it by united effort. The ideas of Mr. T. J. Sawyer, as expressed in his plans a month ago, and the suggestions of Mr. Anderson are worth the careful consideration of the tax-payers of Worcester, who have a right to say what kind of a station and what kind of surroundings the city shall have.

Health in Public Schools

The needs of health inspection in the public schools are clearly set forth in an article of this number of the Worcester Magazine by Dr. W. H. Burnham of Clark University. This address was given before the Twentieth Century Club at one of its recent meetings, and has since attracted considerable attention from health and school authorities. Experts in hygiene and educators demand a greater regard for health in the schools, and inspection is demanded. It is a well known fact that the school is an important factor in spreading contagious diseases, and figures of scientists and experts are given to show the percentage of contagious diseases which originate in the public schools of the larger cities. Dr. Clifton H. Hodge of Clark University, in making comparisons of other cities, found the figures given by experts to agree with results in the Worcester schools.

The Worcester Board of Health for several years has made an annual recommendation for a system of public school health inspection, but the City Council has not furnished the relief that is needed. The question of expense turned the tide against the Board's recommendations. Medical inspection has been tried in Boston, New York, Chicago, St. Louis, Philadelphia, and other large cities, and the results in Boston, as an instance, are satisfying in detail. Dr. Burnham believes, in common with many others who have made health in the schools a study, that a special health officer, standing on a par with that of the Superintendent of Schools, should be appointed and paid a suitable salary. While it may be necessary that he should be under the authority of the Board of Health, nevertheless, he should have a seat and voice in the School Board, and should be consulted in regard to matters relating to health by the Superintendent. He should be a man having expert knowledge of school hygiene, as well as general medical training, and should have the power to appoint the necessary number of assistants, with the advice and consent of the Board of Health. Dr. Burnham says that three things are especially demanded by school hygiene—health inspection by competent experts, the instruction of teachers in the essentials of school hygiene, and the provision for cleanliness in the schoolroom and its surroundings. The community should be awake in regard to matters relating to health.

This paper is one of the most important and instructive which has been given on the subject and deserves the careful consideration of every parent and person interested in the schools and health of the community.

Relieve the Congestion

The Board of Aldermen has set apart Monday night, June 12, for a hearing on a petition to extend Norwich Street to Front. At first thought it may seem like an expensive undertaking to remove one of the business blocks of Front Street for street purposes, but the time must come when Harrington Corner will have to be relieved of a considerable part of its travel. This can be done as cheaply now as any time. Worcester clings to the town idea of doing business in one spot, Harrington Corner. During the busy hours of the day the section is badly congested. If Norwich Street could be extended, it would open up Mechanic Street as a creditable business section, and cars to the Lake and north-end sections of the city could run through Norwich and Foster Streets, relieving Harrington Corner of more than one-half of the street railway traffic. It is a wise business policy, no matter what the cost, to parallel Main Street with business streets. The petition which the Board of Aldermen has to consider is not long, but contains the names of some of the most influential tax-payers of Worcester. Property owners who are to be directly affected will not oppose it. Relieve the congestion at Harrington Corner, and relieve it now.

Started by Mayor Blodget

The State Board of Trade went to the Massachusetts Legislature with a vigorous protest to the bill giving the Boston & Maine Railroad the right to acquire the properties of street railway companies. Mayor Walter H. Blodget, delegate from the Worcester Board of Trade, introduced into the State Board Executive Committee the resolution which resulted in the protest. The "merger bill" won by a single vote on a reconsideration issue.

Attorney-General Herbert Parker, on the question of the relative rights of steam railroads to purchase the stock and railways of street railway companies, decided the action of the New York, New Haven & Hartford Railroad in purchasing the stock of the Springfield Street Railway Company, is illegal.

He decides that this illegality lays the charter of the corporation, in so far as it exists by grant of the Massachusetts Legislature, open to forfeiture.

Under the circumstances of this decision, it looks as though the situation had become more tangled than ever before. The answer of the Attorney-General, however, points out the need of clarifying the statutes regarding this matter. He does not feel called upon to go into the matter of interpreting the rights of the Boston & Maine and the New Haven roads to hold or buy stock, and in considering the question of forfeiture of charter he believes the ambiguity of the statutes to be a stumbling block which must be removed before the Legislature can act with discretion. The need of statutes covering the control of street railways by steam roads is plainly apparent.

Boston Committee Reduced

The bill reducing the number of members on the School Committee of Boston from twenty-four to five, has been signed by the Governor and is now a law. It makes a radical change in the educational department of that city, but there is a general belief that the change is a good one. The original bill provided that the five members of the committee be appointed by the Mayor, but a substitute bill provided for election by the people. This leaves it in the hands of the voters themselves, and they must continue to be responsible for the result.

The education of the children of the citizens is something that is felt to be more or less the concern of every household. The right of personal participation in the selection of those who are to be invested with this delicate responsibility is one which high and low, rich and poor do not readily relinquish, and we regard their reluctance to do so as a healthy symptom.

WORCESTER NATURAL HISTORY SOCIETY ---ITS WORK AND WORTH.

THE Worcester Natural History Society has long since outgrown the accommodations of the dwelling house on the corner of Harvard and State Streets, given several years ago by Mr. Edwin Conant.

Dr. W. H. Raymenton is engaged in a movement for a new building and a permanent endowment. Worcester has always responded generously in carrying on the work of this society, and our representative educators and business men have served on its board of directors. The time has now come when a suitable museum building adequately equipped, and a permanent endowment should be secured.

The society has made a record for educational work along original lines that has commanded the attention and commendation of our best educators. Its methods have been in some respects similar to those used at our Free Public Library in teaching how to best make use of its museum and its collections. Acting on the suggestions of Louis Agassiz, in the early days, and later those of Alexander Agassiz, his son, the society has done a work in popularizing nature study that has not its parallel in the history of any other society in the world.

Twenty-five years ago, under the presidency of Dr. Raymenton, a plan of work was inaugurated which has been carried on with increasing success from year to year. Scores of willing workers have given their services to teaching thousands of students who have attended its free public classes. The Natural History Camp for boys and girls on the forty-acre park at Lake Quinsigamond, was organized twenty years ago, and was the pioneer of the many similar camps and summer schools since established throughout the country. This year, in the line of evolution, the Natural History Camp will be held for the special use of teachers. By this plan the 20,000 boys and girls in our city schools may, through the teachers, receive the benefits of the summer's work at the camp.

In this issue of the Magazine we are glad to present from several points of view, the work of one of the educational factors in our community: the Worcester Natural History Society.

EDWARD EVERETT HALE.

The Worcester Natural History Society—Its Past and Present Work and Worth as a Popular Educator.

I had the honor to preside at the first meeting of the Worcester Natural History Society, as it is now organized, years ago. I had been greatly interested in its formation, and while I lived in Worcester I did my best in it as a member and an officer. I had but very slight knowledge of any department of natural history, but my interest in botany and in mineralogy was quite in proportion to my ignorance, and I greatly valued the frequent conference brought about by the society with so many who knew more, and some who knew as little as myself.

From the very moderate beginning, which we then made, there has grown the strong working society of to-day, which has become an important force among the best agencies of this Commonwealth for universal education. The function of collecting a museum, popularly thought of as the first and principal business of a society of natural history, ought not to be made an end, as it is so apt to be; indeed, it is too often the end of the society in more instances than one; for, if the collection be all the members have to think of, they soon exhaust the superficial resources of the flora and fauna and the mineralogy of the neighborhood, and the society dies "because it had nothing to do, you know."

The truth is that it is only when the good beginning of its museum has been well made that a true society for natural history is able to begin its proper work. The members really associate to learn more than they know of the method of nature and to teach what they have learned to others who do not know. In these two lines of work, the museum is one of the requisites, as the library is another, and such tools as microscopes are others.

The first stimulus given to our society was that which we received from Louis Agassiz, who, with his own inborn kindness, acceded

to an invitation and at the first meeting of the society gave a sketch of its possible work. This sketch, as I reported it in shorthand at the time, will be found in the early records. The suggestions it makes as to the value of honest observations made by straightforward working and listening, by people who are not book learned, may have seemed at that time chimerical. But they have been made good, and more than good, in the experience of those who carry on the society in its work of to-day. Louis Agassiz, indeed, brought to New England a gift which New England cannot be too grateful for, in giving a start, wholly new, to the popular interest in natural science; in encouraging everybody to observe, whether they studied books or not, and in setting accurate and continued observation in its fit place of honor.

Agassiz was never more brilliant, and I think never more happy, than when he showed to great popular assemblies that every man, woman and child of them was a student of natural history, or might be; when he unfolded the possibilities of observation to them, and charmed them with stories of the unexpected and marvelous which they could discover.

I have certainly been greatly interested in tracing the success of the Worcester Natural History Society. Side by side with the admirable Public Library of Worcester, so admirably administered, this society is not satisfied with calling together the people now well educated, who have already the passion of observation and study in the things of nature. It goes out into the highways and byways to find others who have not yet seen the vision, and if it be possible, to inoculate them with its enthusiasm. More than this, it seeks to extend such an interest up and down through the country that every man and woman shall be a competent "observer."

The Natural History Society proposes and hopes to make use of every man's knowledge and to show the working men everywhere how wide is the opportunity which they have of enlarging the knowledge of the world. It may well take some pride in the discovery on the spot of fossilly plants by Joseph H. Perry, one of its own members which has rescued our Worcester "coal mine" from the anomalous limbo in which the older geologists placed it, and has restored it to an intelligible foothold in the order of created things.

In the determination to teach popularly all who are disposed to learn to observe, the society has carried on in the last 25 years free classes through each winter, which have been attended by hundreds of students. It is fair to say that hardly one of these students would or could have prosecuted these studies under the conditions exacted in regular schools. The instruction given and the interest aroused have been so much additional to the result of the regular school education. Indeed, as any one knows who has followed closely the methods possible in the public schools, they can, under the present conditions, do but very little toward quickening personal habits of observation or making enthusiastic naturalists of their pupils.

"He that hath eyes to see, let him see; and he that hath ears to hear, let him hear." This was the prayer of the Savior of the world when he saw how superficial were its observations of what was in its very presence. He prayed that men might carefully find out for themselves the truth which reveals itself so wonderfully and so freely. The trouble with the world, alas! has been, and is, that men receive as truth what somebody else says he has seen, and that they are too easy or too lazy to use the senses which God has given them. To make men see the difference between those who have eyes and those who have no eyes, is the wish of every true educator in every generation.

SAMUEL S. GREEN.

Librarian Free Public Library, tells of the Men who Aid the Natural History Society.

The department of natural history was formed in 1854, and it is interesting to recall the names of some of the young men who were interested in it in early times and who have become prominent citizens since. The first president of the Young Men's Library Association was the late Francis H. Dewey, afterward a distinguished judge of the Superior Court of Massachusetts. The second president was the lately deceased Senator Hoar, loved and revered by everybody in this community. Joined with Mr. Hale was Thomas Wentworth Higginson, then a preacher in Worcester, and now a venerable representative of the cluster of men who have given our country reputation in English literature.

One of the most devoted friends of the Natural History Society was the late Dr. Rufus Woodward. The father of the present Mr. Salisbury was one of its warmest friends. So, too, were the late Albert Curtis and Edwin Conant.

Among the living who were early friends of the association and society are such men as Stephen Salisbury, Charles A. Chase, Nathaniel Paine, Henry A. Marsh, Joseph H. Walker and T. E. St. John.

A little later, great interest was shown in the Natural History Society by Thomas H. Dodge and Horace H. Bigelow.

After the Young Men's Library Association (which having joined the old Worcester Lyceum), was then known as the Worcester Lyceum and Library Association, had united with Dr. Green in giving their libraries to the city of Worcester, in December, 1859, to form the nucleus of the Free Public Library, the natural history department became the greater part of the old society.

My active interest in the Natural History Society became especially intense in the early eighties, when a revival in its work

began, under the leadership of Dr. W. H. Raymenton. I was chosen treasurer and held that position for several years.

I can speak from observation, under the most favorable circumstances, of the great usefulness of the organization at that time. I was very much impressed by the power which the well directed enthusiasm of our leader was able to exercise and by the results which followed his labors. I believe that the society has always done excellent work.

Others, however, are more competent to speak of its late accomplishments in the way of instruction. Dr. Raymenton has always had the interests of the society at heart, and has ably seconded the long continued, disinterested work of such men as the late Dr. Merrick Bemis and the two living and lifelong workers for the society's interest, Herbert D. Braman and Henry Billings.

I have known that Dr. Raymenton intended to renew his activity in promoting the interest of the Natural History Society, when he could find leisure to work for it, and it is with singular pleasure that I learn that he is at present about to engage in the work of putting the society on a firmer basis and enabling it to enlarge its work.

Worcester has treated the Natural History Society generously in the past. The society received a bequest of his house and grounds from Edwin Conant, and with this gift $10,000 in cash, the income of which is used for the benefit of the society. Hon. J. H. Walker gave it $5000 with which to buy Natural History Park, and Thomas H. Dodge built the pavilion at an expense of $2000.

H. H. Bigelow built a workshop at the park and stocked it with tools. Albert Curtis and Mrs. John W. Wetherell left $5000 each to the society.

Men, women and children without number have, when called on, given from $5 to $500 a year for a series of years, to pay the annual expenses of the organization.

It is certainly to be hoped that citizens now in active life of large and moderate means, will give such sums as they can afford to help along the work of this useful institution.

It is especially desired by the officers of the Natural History Society to awaken a strong interest in natural history in the young. It has always aimed to do well this portion of its work. It wishes to do it better and to have the means for delivering at school houses specimens, just as the Public Library sends books, by the aid of the School Department, to those buildings.

It means to begin this year to make use of Natural History Park for the benefit of the teachers, and desires money to enable it to increase work of this kind.

Prof. Louis Agassiz in an address which he made on the occasion of the foundation of the natural history department of the Young Men's Library Association, dwelt upon the importance of giving especial attention to the local flora and fauna.

It is very interesting to note the valuable contributions to local natural history which have been made by the Natural History Society, in print as well as in its collections and instruction.

It has published three valuable works: "Flora of Worcester County," by Joseph Jackson; "Geology of Worcester," by Joseph H. Perry, and "Flora of Lake Quinsigamond," by G. E. Stone, the well-known botanist.

Mr. Jackson and Mr. Perry are known to everybody in Worcester and need no introduction.

It is understood that Miss Arabella H. Tucker gained much of the inspiration which was needed in getting out her valuable book, "The Trees of Worcester," from her work in the rooms of the society.

The society has, I understand, a considerable amount of excellent material on local natural history ready for publication as soon as it can get means for engaging in this kind of work.

Dr. Merrick Bemis.

Extract from Annual Report of the Worcester Natural History Society.

Anything which brings nature closer to our schools and the pupils closer to nature, and which brings the youth of the whole community into a close communion with nature, does a good work which goes beyond and outlives all other results of a school education. Aside from economic values, it gives pleasure to the most barren lives; it opens up vistas of beauty in the most desolate surrounding, and fills every heart open to its kindly influences with love and adoration.

The human race derives greater benefits from a successful study of the science which treats of living things than from all other sciences put together. Natural history deals directly with human nature; with its misery and happiness; with its health and disease. Its office is to treat of climatic influences; with violent and unexpected extremes of heat and cold; wetness or dryness; with the ravages of noxious plants and animals; with diseases of both men and animals, of useful and baneful animals and of untimely death. All these things belong to the domain of natural history, and for an ultimate deliverance from any of the evils, we must depend upon the student of natural history; but for the progress the race has already made in finding out the means of overcoming these evils, we should to-day be almost as helpless as Pharaoh was against the plagues which afflicted Egypt. Respecting the very important work the society is doing in giving instruction to these teachers and others: It is a matter of great regret that a lack of means and facilities for carrying out such work pre-

vents our accomplishing all we desire, and have from time to time planned to do.

The means for carrying on the work of instruction are not our only want, but perhaps are the most pressing. The house is not well adapted to the uses of the society. It is small and inconvenient; more than one-third of our collections are packed away and are never shown; there is not room in the house to accommodate our classes and lectures; a larger number of classes would be taught every season and more frequent lectures given if we had sufficient room in which to accommodate them.

Our hopes for the future are such as will commend themselves to all. They are simply that we may be able to meet the increasing demand from a rapidly growing community for instruction in natural history, and that the day may not be far distant when we shall possess a museum building which shall serve the purposes of the society and enable its members to increase their usefulness and become benefactors to the community in a wider sense.

E. Harlow Russell.

Opinion of Principal of State Normal School.

Worcester has for many years prided itself on being an educational city, and its reputation in this respect is growing. Its older institutions have been enlarged and enriched, and new ones of high character have been established. But with all its facilities, it is deficient at two important points. It lacks a college for women, and it lacks an adequate natural history museum. As the second city of the Commonwealth, it ought to have both. Of the first it is not the present purpose to speak, although there is much to be said. The Natural History Society is an agency for scientific training which should not be allowed to die. Its early history, if nothing else, should save it. But the framework of its organization is sound to the core and would sustain a large expansion. What it needs is a permanent well-paid staff, led by a man who can do for it what Alpheus Hyatt did for the Boston society or what Samuel Green has done for our Public Library. That means, of course, a sufficient endowment or else a long list of reliable annual contributors. It has done in a quiet way a vast amount of good. It fills a place of its own not filled by any other organization, and is capable, with proper support and direction, of filling a much larger place and of supplementing the work of every other institution in the city. With the greatly increased attention now given in the public schools to "nature study," as well as to science in general, there is more need than ever before of such aid as this society was organized to afford to a large and increasing class of people. With adequate means and under a board of directors who would be proud to serve it, there would be no further need to magnify its past history or exaggerate the features of its splendid equipment. It would create its own constituency, attract its own enthusiastic following, become a seat of authority in its domain, and make in due time valuable contributions to science.

Mr. Herbert D. Braman.

Extract from Annual Report of Superintendent of the Museum of the Society.

A visitor to our museum ought to be able to start at the simplest forms of life and follow up to man on the one hand, and the highest plants on the other, on the plan suggested by Agassiz, namely, the outside world represented by a type of each important group or order, and Worcester county by every species.

We need a lecture room. Repeatedly during the past year the room so used has been too small to hold all who came, and our chairs were too few to seat all who could get in.

As much is being done with our present income as can be done. Some of the improvements suggested may be made by a small addition to our yearly income; but to do all this as we might, involves considerable money and suitable building in which to display our material. Such a building would give opportunity to show well biological series from lowest to the highest plant and from lowest animal to man, arranged so as to have educational and utilitarian value. It would also show the minerals and rocks of the county and the important ones of the outside world; the geologic systems of the country, state and world; structural and phenomenal geology, economic geology; paleontology in connection with biology and geology. It would have mineral, chemical and biological laboratories, lecture rooms, and a suitable library. The material in such a building could be so arranged as to make it as good a place of recreation even as an art museum.

What an immense influence for good such an institution might have in this city!

We are doing good work as it is. Our building is out of the way in location, off a street car line, and on top of a somewhat forbidding hill—especially in the heat of summer, and with the ice of winter—notwithstanding we are visited by 6000 people yearly. Many, old and young, come to see our exhibits, permanent and transient; many to attend the lectures and classes—and thus through those who are teachers, indirectly hundreds of children of the schools are reached. Many teachers bring their classes here for study; many come for specimens to study both here and at home, and teachers for material with which to illustrate lessons at school; many children come to attend the bird, botany and other classes; many people come for the purpose of identifying and

having identified birds, insects, minerals, rocks; some to learn the best way to combat harmful animals and plants.

All this is unmatched in the wide world, and as free as the air we breathe. It seems to me that the people of Worcester should be proud of such work and enthusiastic in its support.

DR. CLIFTON F. HODGE.

A Letter of Appreciation on the Work of the Society.

Clark University,
Worcester, Mass., May 11, 1905.

My dear Dr. Raymenton: What we need more than anything else to counteract the shallowness and artificiality of so much of our modern life is a genuine revival of interest and love of nature. I use the word "revival" in its religious sense on account of the deep significance of this side of life. Nothing can allay the bitterness and neutralize the acid of our social and industrial strifes like the "one touch of nature" that "makes the whole world kin." This great need, now beginning to be universally felt, is prompting a general movement natureward. And in this great movement toward so much that is sane and wholesome in education and in life, it gives me the keenest satisfaction to see our beloved Worcester in the forefront. The Worcester Natural History Society, with its more than fifty years of faithful service to its credit, is the organization to which we should look for leadership, and it is with great pleasure that I note the renewal of interest in the work of the summer camp at Lake Quinsigamond. Such a summer school as you project, conducted along the most approved lines of modern nature study, will be a credit to our city.

Very truly yours,
C. F. Hodge.

THOMAS H. DODGE, ESQ.

On the Special Work at Natural History Camp.

Worcester, Mass., April 28, 1905.

Dr. W. H. Raymenton, Worcester Natural History Society:

My dear Sir: It gives me great pleasure to learn that your old-time interest in said society and the original and useful channels of instruction it has ever sought to promote and extend, has been aroused by the return of another spring to the adoption of a new and, as I believe, a unique course of action, and one, too, well calculated to win public approval and confer lasting blessings not only upon the citizens of the city of Worcester, but upon the citizens of the county and Commonwealth, while presenting a noble example and marked object lesson to the citizens of the entire country.

Some eighteen or twenty years ago, when you brought before the Worcester public the plan of a boys' vacation school on the shore of Lake Quinsigamond, there was a pressing want of a suitable building in which the boys could meet for social intercourse and also where they could receive and entertain their visiting friends, and where lectures and addresses could be given. My interest in the efforts of said society prompted me to furnish the necessary amount of money to build Dodge pavilion, and thus provide for all of said contingencies. Later, when you took steps to give to girls the advantages the boys then enjoyed, I aided in your successful effort.

Lord Armstrong expressed a great truth when he said that "a man's success in life depends incomparably more upon his capacities for useful action than upon his acquirements in knowledge." The work which your society has undertaken is attracting the close and interested attention of eminent and thoughtful educators, and has direct and intimate relation to the great problem of the nineteenth century, viz., the proper and rational education of the young.

The present plans of said society and yourself being to substitute a vacation school or ways for a course of instruction in natural history for teachers are approved by both Mrs. Dodge and myself, and inclosed please find checks from us (both amounting to $1000), to aid in the grand effort which you are now making in the cause of humanity.

Yours truly,
Thomas H. Dodge.

DR. G. STANLEY HALL.

President Clark University on the Importance of the Study of Nature.

Believing profoundly as I do in the poetic, sentimental and religious appeal which nature makes to the soul, it is plain that for some years preceding adolescence the normal child can be appealed to on the practical, unsentimental, and utilitarian side of his nature.

The time has now happily passed when it is necessary to urge the importance of the love and study of nature, or to show how from it has sprung love of art, science and religion, or how in the ideal school it will have a central place, slowly subordinating most other branches of study as formal and accessory, while it remains substantial. To know nature and man is the sum of earthly knowledge.

G. Stanley Hall.

HEALTH INSPECTION IN THE PUBLIC SCHOOLS.

The following paper on "Health Inspection in the Public Schools" was given by Dr. William H. Burnham of Clark University, before the Twentieth Century Club, creating some discussion and attracting much favorable comment.

NOT only do experts in hygiene and educators now demand a greater regard for health in the schools, but the community is dissatisfied with present conditions, and one great cause of this dissatisfaction is the knowledge that school life is often injurious to health. Intelligent citizens object to a law that requires children to attend school where often the conditions are such that a child cannot stay in the school room without grave danger to health.

From the wider point of view of public hygiene, health inspection in schools is demanded. The health of children is determined largely by three factors: heredity, the home, and the school. The first two of these factors cannot well be controlled by the community, but the third factor—the school—can be controlled with regard for health. Thus the school, where practically all the children of the community are brought together, offers, on the one hand, a most favorable opportunity for controlling and averting disease; and, on the other hand, a most dangerous place for the spread of disease.

That the school is an important factor in spreading contagious diseases, has been shown not only by every-day experience, but also by the results of special investigation. Koroesi, for example, found during the three-quarters of the year when the school was in session, 4400 cases of measles per month, but for the vacation month of August, only 780 cases; for the month of September, the first of the school year, only 639; and only 1695 for October. Taking the four quarters of the year, there were for the three months of vacation only 3054 cases, while for the first quarter of the year there were 11,865; for the second, 13,358; for the third, 13,147. In part this might be accounted for by the influence of the seasons and other factors, but further proof of the causal relation between school attendance and the spread of measles was found from the fact that when the time of vacation was changed—as occurred one year on account of the cholera—the period of minimal number of cases was altered correspondingly. Dr. Hodge found similar results in Worcester.* Scarlet fever, diphtheria and whooping-cough are also spread by the school.

Many other facts urge the necessity of health inspection in the schools. Many investigations during the last twenty-five years have shown also the large percentage of school children suffering from chronic diseases. Again the study of the sanitary conditions of school houses made in many cities, Boston, Philadelphia, Buffalo, Baltimore (and recent experience indicates that similar results might appear from investigation in Worcester), show the existence of some school houses that defy almost all the accepted principles of hygiene, and whose use for purposes of instruction is a disgrace to civilized communities. And, finally, the need of health inspection is emphasized still further by the fact that in the modern reconstruction of school programmes, and the like, special regard for hygiene is demanded unless the health of the children is to be injured. Not merely has the enrichment of the programme often become the impoverishment of the children, but the school work itself cannot be carried on most efficiently without regard for hygienic principles. Modern hygiene now demands that every educational principle and method, the choice and sequence of studies in the curriculum, and all the details concerning text-books,

*For a fuller treatment of this and some other points, see an article by the writer, "Pedagogical Seminary," April, 1900.

apparatus, and the like, should be studied from the point of view of hygiene. In a word, the aim of modern hygiene is no longer merely negative, that of the prevention of disease, but also positive, to develop habits of healthful activity.

Fortunately the value of health inspection in the schools has now been demonstrated by the experience of many cities, both in this country and in Europe.

The method and scope of the inspection vary greatly in different places. Most important is considered the inspection of the physical condition of the newly entering pupils. Second, is frequent investigation for the early detection of cases of contagious disease. But in Germany the health inspection is carried usually much farther than this, and includes not only periodic examination of the physical condition of the children, but investigation of the sanitary condition of the schoolhouse and its surroundings, and in some cases detailed examination of the physical condition of the children, as regards height, weight, chest girth, lung capacity, muscular development, visual acuity, etc.

At present, these numerous functions of health inspection must be divided between the teacher, the superintendent and special medical inspectors. Just what duties should fall to each must be determined largely by local conditions.

This health inspection must be largely made by experts. Even if teachers had the hygienic training that they ought to receive, nevertheless, it is no simple matter to determine what is necessary in a group of fifty children where half of them are likely to have some disease or physical defect; and child hygiene is a much more complicated matter than adult hygiene, because the child's body is a growing organism. It is necessary to take special precautions at certain periods of life. For example, the young child is specially susceptible to contagious diseases. The infant differs greatly from the adult in its protection from injurious agents from without. The young child is specially liable to infection; nothing offers great resistance, neither the skin, nor the blood, nor the tissues. As regards the lymph, according to Weill, the child has as good or better protection than the adult; but in all other respects is not as well protected. The child's blood is less alkaline than that of the adult, and hence offers less resistance to the action of micro-organisms; and the germ-destroying or bactericidal power of the serum is not as great in the child as in the adult; and, finally, the white corpuscles of the blood do not present as effective defense.

The white corpuscles comprise the lymphocytes without germ-destroying property and the mobile leucocytes or phagocytes supposed to have such power. In case of the adult, to quote Weill's figures, the lymphocytes lacking bactericidal power comprise 27 per cent. of all the white corpuscles. With the child in the first year, from 50 to 60 per cent.; in the third year, 39 per cent.; from the eighth to the tenth, 29 per cent. On the other hand, the leucocytes, or phagocytes having bactericidal power, in case of the adult are 70 in 100; but only 28 at birth; 40 at the end of the first year; 54 in the third; 64 from the eighth to the tenth. Thus the effective army of defense, the leucocytes with bactericidal power, is twice as numerous with the adult as with the nursing child; and the child, on the other hand, has three times as many of the neutral leucocytes as the adult.

It is not surprising, then, that children are specially liable to contagious diseases. For a single illustration, take measles. This is not considered a dangerous disease. Probably most physicians in ordinary practice seldom meet with a fatal case; but with young children, especially those among the poorer classes, it is serious. In Munich, between the years 1888 and 1895, 28,989 cases of measles occurred, and of these 1077 proved fatal. Of cases that occurred in the first year of life, in round numbers, 21 per cent. proved fatal; of those that occurred between the years 2 to 5, 5 per cent., and of those between the years 6 and 10, only 0.4 per cent. That is, if an epidemic of measles occurs in the kindergarten the chances are that four or five children in a hundred cases will die. If you can postpone the epidemic

until the age of the primary school, the chances are that only four out of a thousand cases will die.

Again, at puberty or the beginning of adolescence, the youth is specially susceptible to certain disorders. For example, Dr. Knopf says that at this period the youth is specially liable to contract tuberculosis; hence special care should be taken to avoid means of contagion, over-work, and specially nervous exhaustion.

Thus it is necessary to have an expert, not merely a physician, but one who understands the physiology of development and the demands of hygiene. The need of expert advice is seen also if we consider the number of ill and defective children. In view of innumerable investigations, it is perhaps a conservative estimate to say that in a class of fifty school children there are likely to be forty that have decaying teeth; twelve having defective vision; ten, defective hearing in one or both ears; five, adenoid growths which interfere with the nutrition of the brain; two children probably have curvature of the spine; perhaps a boy or a girl stutters; several suffer from hysteria or other nervous disorders, not to mention a number who have chronic diseases like anaemia, scrofula, headache, or the like. Such children are in every school; we cannot ignore the fact.

I can speak only briefly of what has been done. Medical inspection was urged in Germany more than thirty years ago by Falk and Virchow. Soon after, in 1870, medical inspection was advocated in this country by Dr. Sequin of New York, Dr. Wey of Elmira, and others; and in Belgium and France, and one or two other European countries, such medical inspection had already been begun with more or less efficiency. At the present time most of the large cities of Germany have medical inspection, perhaps nearly half of those of medium size, and some of the smaller ones, and a great deal of attention is devoted to the subject there. The special periodical, *Der Schularzt,* published in Zurich, has reported the results of this experience, and given in great detail the methods. As a rule, this has been accomplished without great expense, and the facts reported there and elsewhere establish beyond question the need of such inspection.

To take a recent report almost at random for illustration, that of the city school physician for Leipzig for the year 1902 will serve. Eight thousand eight hundred ninety-three children were examined during the year. Of these it appeared that in round numbers 27 per cent. suffered from defects of vision; 12 per cent. from defects of hearing; 57 per cent. had bad teeth; 25 per cent. had adenoid growths; 3 per cent. cardiac defects; a fraction of over 1 per cent. scoliosis, or lateral curvature of the spine; 5 per cent. skin diseases and parasites; 9 per cent. various disorders; and between 600 and 700 children were reported as needing permanent supervision as regards their health.*

In this country medical inspection has been tried in the cities of Boston, New York, Chicago, St. Louis, Philadelphia and a number of others. It would be tiresome to recite statistics, but for a single illustration, take the first year, 1894, of this inspection in the city of Boston. The total number of children examined from November 1, 1894, to October 31, 1905, was 14,666. Of these, 438 had some infectious or contagious disease; for example, 70 had diphtheria, 110 had measles. These children were in their seats with the other pupils, spreading these diseases throughout the school. The timely detection and exclusion of these children was of the utmost importance, although, of course, nobody can tell how many new cases were prevented. Of the total of 9188 pupils who were found to be sick, 5689 had acute or chronic diseases of the throat.

The needs of daily medical inspection are shown most vividly by concrete illustrations; one instance is as follows: "A school teacher had a sore throat; her physician told her she might continue teaching. Within two weeks five children out of her room died; and there were over forty other cases of diphtheria

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**Der Schularzt,* 1904, No. 5, pp. 99, 100.

in the same school which were traceable to her as a source of infection."*

Superintendent Johnson of Lowell gives the following report of two schools of about the same size, of which one had medical inspection, the other not. In the former a case of diphtheria occurred: "A physician was sent to that school every day for a week, and any case of sore throat or indisposition was referred to him for advice. Antiseptics were used about the building. The school attendance continued as usual and there was no other case of the disease. In the other school, a child became sick with diphtheria. It was not at first known that the child was sick with diphtheria and her brothers attended school for a while, but were soon excluded. An attempt was made to have a physician in regular attendance and under advice, but it did not succeed. The school was closed for a season. Four children in the community died of diphtheria within a few weeks. It would not be justifiable to claim that had the school pursued the same policy as the first, no more children would have been taken ill, yet each reader may draw his own conclusion as to which policy was most wisely devoted to the safety of the children, as well as to the education of the community, particularly as some of the children who died were past hope before they were seen by any physician."

Expert inspection is necessary also for pedagogical reasons as well as hygienic. When contagious diseases appear the schools are often closed unnecessarily, and even when it would be better for the health of the children to have them continue in session. The cause of closure is usually panic. To take measles again for illustration: when an epidemic occurs there are usually two crops—the first which spreads the seed, and the second which usually includes all the susceptible material; the third crop, if it comes, is usually very small. Now it is obvious that in case of this disease, it is useless to close the school unless it is done before the first crop appears. Usually the schools are closed, if at all, after this time, and the closure is of little or no importance. The rule has been formulated somewhat as follows: If there is a considerable amount of susceptible material, the school should be closed when the first case appears. Closure is of course the more necessary the younger the children.

Again, take the case of diphtheria. As is now well known by physicians, diphtheria is a personal disease, and in case of children who have it, often for weeks and even months after recovery, the Klebs-Loeffler bacillus remains in the nose or naso-pharynx. Thus pupils often return to school still carrying the germs of the disease, or in mild cases they may remain in school without its being detected. Such children are called "carriers" of the disease. Dr. Kerr, the medical officer of the late London School Board, in his report for the year ending the 25th of March, 1904, maintains that in case of diphtheria it is often better to continue the school than to close it. "It has been shown," he says, "that school closure ought seldom or never to be necessary in elementary schools, owing to the prevalence of diphtheria. With modern technique it is possible to discover who are spreading the disease and to obtain their exclusion. The objections to school closure are that the 'carriers' are not discovered and isolated, and that there is not the least guarantee that at the end of the period of closure the children who are the cause of the spread of the disease will be innocuous. The closing of schools for diphtheria should be looked upon as a confession of impotence and defeat."

It should be admitted that the results of medical inspection have not been altogether satisfactory. Some of the reasons are as follows: In many cases the number of children, from 4000 to 6000, allotted to one physician, has been altogether too large; in some cases the physicians appointed had not had proper training; sometimes the teachers have not co-operated properly; and again more serious has been the lack of co-operation on the part of parents—frequently ignorant parents object to the necessary work of the physician—and, finally, in some cities unfortunately school inspection has become a matter of politics.

*Lamb, D. S., "The Daily Medical Inspection of Schools," The New York Medical Journal, Dec. 7, 1901, p. 1051.

Many objections have been urged against medical inspection. In the first place some physicians have objected on the ground that the creation of a special class of school physicians would interfere with the practice of regular physicians; but it is not the business of the school doctor to prescribe for any pupil. Again, objection has been made more seriously by teachers. It has been thought that medical inspection would interfere necessarily with the school work, and that the right of special officials to come into the school would be a constant source of disturbance and friction. Objections have been made also by the community on the score of unwarranted interference with individual liberty. None of these objections seem to be serious.

As in every other matter concerning the schools in this country, the plan that can best be adopted must be determined largely by the local conditions. In the large cities, however, some such plan as the following would seem advisable: A special health officer, standing on a par with that of the superintendent of schools, should be appointed and paid a suitable salary. While it may be necessary that he should be under the authority of the board of health, nevertheless, he should have a seat and voice in the school board, and should be consulted in regard to matters relating to health by the superintendent.

This special health officer should be a man with competent training, having an expert knowledge of school hygiene, as well as general medical training. It is not enough that a man should have the general medical knowledge of the ordinary physician. This expert should have power to appoint the necessary number of assistants, with the advice and consent of the board of health. And the number of children allotted to one physician should not exceed one thousand or fifteen hundred. With one expert chief inspector it would probably be possible to appoint young physicians for assistants and pay them merely a nominal salary, and in this way the expense need not be extremely great.

Three things are specially demanded by school hygiene: 1. Health inspection by competent experts; 2. The instruction of teachers in the essentials of school hygiene; and 3. Provision for cleanliness in the school room and its surroundings. Fortunately experience has demonstrated the possibility and the advantage of each one of these requirements.

Finally, for the best success, it is essential that the community should be educated in regard to matters relating to health. From a purely economic point of view, a strong argument can be made for medical inspection, for when disease is prevalent in the school, the community has to pay for services that it does not get because the children are absent from school, and also an epidemic of disease is an extremely costly thing for the community. Although medical inspection may not be very expensive, still it should be frankly admitted that it will cost something. It is true that, both in the home and at school, health costs money, but there is no investment that pays better dividends. Any community, however, that is willing to argue this question on a purely economic basis, is one that so sadly needs education in regard to hygiene that any plan of health inspection will be seriously handicapped.

A distinguished foreigner has recently said that in this country we have no preventive legislation; our laws are passed only when some specially serious evil has arisen that demands legislation. The same is true especially in matters relating to health. We give little attention to preventive medicine and hygiene until some very obvious evil, some epidemic, or the like, arouses public sentiment and makes us attempt to find a remedy. Sooner or later, to bring the matter home, it is certain that Worcester will have health inspection in the schools and clean streets outside the schools, but it may be that we must wait until some serious epidemic closes the schools and carries away a large number of children. Why should we not profit by the experience of other cities? When the value of health inspection has been demonstrated, why should we wait to be among the last to adopt it?

Dr. William H. Burnham,
Clark University.

GOVERNMENT WAREHOUSE FOR WORCESTER.

THE United States Treasury Department has granted to Worcester a government storage warehouse in connection with the port of entry. This comes as the result of an agitation started by the Board of Trade at the January meeting of its directors. Petitions were signed by importers and forwarded to the Treasury Department. Upon these petitions a hearing took place in Boston before Assistant Secretary J. B. Reynolds, who came on from Washington for that purpose. At his suggestion additional evidence was furnished the department which convinced it that the business of Worcester fully warranted that it be given the warehousing privileges. The knowledge that the request of Worcester petitioners would be granted came through the following letters:

TREASURY DEPARTMENT,

Washington, D C., May 8, 1905.

C. H. Pinkham, Deputy Collector, Worcester:

My dear Sir: I am sending to-day to Collector Lyman at Boston, authority to lease the premises suggested for use as an examining and appraising room at Worcester, as the department, after considering the matter, has decided to grant the request of the Worcester merchants for a warehouse in that city.

I send you the advance notice, that you may be informed of the decision.

Respectfully,

J. B. REYNOLDS,
Assistant Secretary.

TREASURY DEPARTMENT,

Washington, D. C., May 8, 1905.

Mr. Harry W. Goddard, President of the Worcester Board of Trade, Worcester, Mass.:

My dear Sir: I take pleasure in informing you that I have decided to grant your request that a government warehouse be authorized at Worcester. I am to-day sending authority to the Collector of the port of Boston to lease the premises proposed for an Appraiser's stores and warehouse, the same to take effect on July 1st of this year. I trust that the establishment of this warehouse in your city will be of benefit to your merchants and that the returns from the same will show their appreciation in a practical way.

Very truly yours,

J. B. REYNOLDS,
Assistant Secretary.

The Treasury Department has selected at the suggestion of Capt. Charles H. Pinkham, deputy collector of the Worcester port of entry, the building at 6 Barton Place as its warehouse, and it will be open for business July 1. While the Board of Trade has worked to bring about this addition to the custom house, prominent in the movement for the warehouse privilege have been Capt. C. H. Pinkham, George Richardson, treasurer of the Clark-Sawyer Co., President H. W. Goddard of Worcester Board of Trade, H. Hodgson of the Queensbury Mills, Alfred Thomas of the Edgeworth Mills, and E. S. Pierce, all importers of considerable importance. While the present order is simply for the privilege and the storehouse will be in rented rooms, if the results of this privilege are satisfying to the Treasury Department, there is little doubt that the ultimate result will be the erection in Worcester of a government warehouse.

The first suggestion of a warehouse came from the Worcester Magazine in the January number. The article was widely read, and the suggestion was taken up by the directors of the Worcester Board of Trade, who worked in conjunction with the officials of the Worcester port of entry.

For more than four years Worcester has been a port of entry of the Treasury Department of the United States. During that time business increased to the extent that it now amounts to $200,000 a year in the collection of import duties. A warehousing privilege applied to this city would give the importer an oppor-

tunity to have his goods stored, to be taken out at his own convenience.

On June 10, 1880, Congress passed an act which permitted merchandise arriving at certain ports therein specified to be forwarded in bond without appraisement or examination to certain other ports, provided it should appear by the invoices or bills of lading that the merchandise was destined for the second named places and the proper entry was made for the same at the original port.

These lists of ports where goods may arrive and be forwarded, and to which they may be sent, have been increased until there are now about 120 ports in the United States to which the immediate transportation privileges have been extended.

This privilege was quickly taken advantage of, and a great portion of the merchandise received at the great ports of New York, Boston, Philadelphia and other coast cities is immediately forwarded in bond to the several ports of destination.

On June 6, 1900, Worcester was, by an act of Congress, made a port of delivery in the District of Boston and Charlestown, and the privileges of the act of June 10, 1880, extended to that port.

Captain F. E. Goodwin, at that time employed in the Custom House at Boston, was appointed deputy collector in charge of the port of Worcester. He opened the office in August, 1900, and continued in charge up to the time of his death on Oct. 18, 1904.

In December, 1900, Jeremiah Murphy was appointed to assist in the work of the office, and is still there.

In January, 1903, C. F. Cook was appointed a deputy collector for the port of Worcester, and is there at the present time. Upon the death of Capt. Goodwin, Capt. C. H. Pinkham was appointed deputy collector and is now in charge of the office.

The advantages of having Worcester a port, which were readily seen by a great many of the merchants and importers, are, first, the element of cost. It does not cost so much to do the work of entering the goods as it does to employ a broker to do it. Second, and much more important, with a great portion of the merchandise, the goods are taken directly from the steamers, placed in cars, the cars sealed up and sent to Worcester, so that there can be no handling nor tampering with the goods in transit. Again, when merchandise is entered at the port of arrival, it must be opened, unpacked, examined and appraised by the officials, then repacked and shipped to its destination. This repacking and shipping is attended by a great deal of danger from breakage, etc.

One disadvantage under which the customs business was carried on in this city is the fact that the warehousing privileges had not been extended to the port of Worcester. It is principally because they had not been asked for.

It is certain the establishment of a bonded warehouse will materially increase the importations into this city.

WORCESTER BOARD OF TRADE.

BANK BUILDING, 11 FOSTER STREET.

OPEN 8.00 A.M. TO 5 P.M. PRESIDENT'S HOURS: 1 TO 2 P.M. MONDAYS, TUESDAYS, WEDNESDAYS AND FRIDAYS.

PRESIDENT, HARRY W. GODDARD. VICE-PRESIDENT, PAUL B. MORGAN.
TREASURER, H. WARD BATES. SECRETARY, HERBERT M. SAWYER.

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Clerk of the Corporation, CHAS. PERKINS ADAMS. *Auditor*, CHARLES A. CHASE.

The Worcester Board of Trade wants to keep on file at the Secretary's office a complete list of places where floor space can be secured for manufacturing and business purposes. There are calls made every day for such information. The Secretary would appreciate it if every owner of a building in Worcester used for manufacturing or mercantile business would furnish particulars of what he has for renting purposes, and if land-owners would also file a list of available building sites. State owner, location, whether store or factory, amount of floor space, amount of power available and approximate rental. If it is land for manufacturing purposes, state owner, location, number of square feet, general dimensions, any building thereon; if so give floor space, number stories, brick or wood, power plant with horse power, and purposes last used. Also give name of railroad near it and side-track facilities. Give price that can be used as basis of negotiation.

This information is for the use of the Secretary, and is not to be used for any purpose except to locate new or present business interests. No compensation is to be asked for any lease or rental that may be brought about by the Board of Trade.

The article in the April number of the Worcester Magazine on "Fire Protection" has attracted considerable outside attention. The New York Journal of Commerce made the following comment:

"Irving E. Comins, ex-president of Worcester (Mass.) Board of Trade and ex-president of the Worcester Common Council, has an excellent article in the Worcester Magazine for April, 1905, reviewing the report of the National Board committee of twenty. The committee has been gratified at the interest shown by business men in the reports. In nearly every instance they have been referred to a special committee of some board of trade organization, and while in municipal affairs it is not possible to secure immediate remedial action, still a standard is fixed and as fast as possible it is in most cases being pushed for."

On April 14 a hearing was given by Mr. J. B. Reynolds, assistant secretary of the treasury, at the collector's office in Boston, to the petitioners from the Worcester Board of Trade asking for the establishment of a bonded warehouse in Worcester. The hearing was attended by Collector Chas. H. Pinkham and H. W. Goddard, E. S. Pierce and Geo. Richardson from the Board of Trade. The meeting was entirely informal. The case of the petitioners was presented by Mr. Goddard, showing that Worcester had been a port of entry about four years. The first year the business amounted to less than $100,000, but at the present time it is at the rate of $200,000. It was shown that in a list of thirty-three cities in the country where the government has established bonded warehouses, or where the bonded warehouses are directly under the control of the government, there are only four of the cities, Milwaukee, Wis.; Cleveland, O.; Bangor, Me., and Albany, N.Y., that do a larger custom house business than does the city of Worcester. In many other cities the bonded warehouses are owned by private corporations. All that is necessary to maintain a bonded warehouse in any city is the appointment and presence of a U. S. storekeeper. The profits from such warehouses are derived from the rental of space. It was shown by letters that a number of Worcester manufacturers and importers did not at present enter their goods in this city, because it was their practice to enter their goods in bond, or, in other words, store them in a bonded warehouse and only take them out from time to time as needed, at which time the duties would be paid. If there were a

bonded warehouse in this city, these importers expressed themselves as desirous of taking advantage of it in preference to Boston or New York warehouses, on account of the convenience of getting their goods out from time to time without the expense of employing a broker or the necessity of a trip to Boston or New York. The Treasury Department has the matter under advisement, but expressed the desire that some private individual or corporation should establish the warehouse rather than the government, as they are curtailing expenses in the Treasury Department in every possible manner. Assistant Secretary Reynolds requested that the Board of Trade prepare figures to submit to him showing the probable or approximate amount of business that could be secured.

In proposing an industrial exhibition for Worcester, the Secretary of the Board of Trade says the city is within an hour's ride of 3,000,000 persons, a business advantage possessed by no other city in the country except New York. It can also be said that the diversity of the industries of Worcester is so great that if a certain space only were allowed for each of them, they would fill more space than the industries of any city. In fact, the whole city might be put on exhibition as an industrial show, and the 2,000,000 visitors would find something doing all over the place. Worcester is the birthplace of more different kinds of industry than any other city, and the birth-rate is larger all the time.—*Worcester Telegram, April 20.*

An attractive advertisement of Worcester, Mass., is the menu booklet of the thirtieth anniversary of the Board of Trade of that city, the cover indicating the various industries of Worcester, described and pictured as "The Heart of the Commonwealth."—*Manufacturer's Record, Baltimore Md.*

The Worcester Pressed Steel Co. has contracted for 50,000 miniature safes, to be furnished a New York concern. This is the first order of its kind that has been placed in the United States. The concern is also manufacturing half a million manicure clipper blades for an Albany concern.

The first meeting of the directors of Worcester Board of Trade was Thursday, May 11. The special committee appointed to consider a name for President of the board reported unanimously in favor of the re-election of Mr. H. W. Goddard. He had announced that he could not give to the office the time it should have, but the committee persuaded him to reconsider, and he was unanimously re-elected. Mr. Paul B. Morgan was re-elected Vice-president and Mr. Herbert M. Sawyer was re-elected Secretary.

The recommendation of the Secretary that a booklet be published in connection with the annual report of the Board, to show the advantages of Worcester as a manufacturing center, was discussed. It was voted that such a booklet be issued, and the matter was left in charge of a committee consisting of Messrs. G. F. Brooks and J. Russel Marble, with the President and Secretary.

It was voted to close the rooms of the Board Saturday afternoons during June, July, and August.

William Allen Sons Co., proprietor of the Worcester Boiler Works, has been incorporated under a capitalization of $25,000, an increase of $5000 over the amount originally contemplated, the additional $5000 in cash having been paid in. Herbert M. Dodge of Boston, who has been connected with the iron trade many years, has become interested in the new corporation and has been elected vice-president.

William G. Allen, president, is a graduate of the Worcester Polytechnic Institute and has been manager of the business since June.

The Lombard Machine Co., which recently acquired the machinery, business and goodwill of E. K. Lombard, woolen machinery manufacturer, School Street, has been incorporated under Massachusetts laws, with a capital stock of $25,000.

Channing Smith, who has other mill interests, is president of the company, with H. F. Gould secretary and treasurer, and John J. Wehinger general manager.

The new corporation virtually assumed possession of the business May 1, although the concern had not been incorporated at that time. In addition to the lines manufactured at the shop, the Lombard Machine Co. will manufacture a new card, upon which it controls the patents.

The vacant card clothing manufactory in Leicester, known as the Bisco & Denny leather shop, has been sold to Charles A. Denny of Leicester, and the shops known as the Central and Murdock factories have passed into the control of Walter C. Watson, as preliminary steps to a deal which will put Leicester back in the card clothing field.

When the American Card Clothing Company, which controlled the Leicester factories, sold out its business to a Fall River syndicate, which consolidated the Kent shop on Chandler Street in Worcester and the Central shop in Leicester

into the T. K. Earle factory on Grafton Street, Worcester, it left one shop vacant in Worcester and three in Leicester belonging to the old company.

Leicester business men then talked of reviving in the town an industry that had given work to many hands for many years, and with the purchase of the idle shops, plans had progressed to a favorable point in the establishment of a new industry in the town, when the death of W. F. Whittemore of Leicester, who was to be manager of the proposed company, interfered with preparations for active work. When an administrator is appointed for Mr. Whittemore's estate, further steps will be taken to organize a company and select a manager.

Walter C. Watson, who is active in forming the new company, is associated with the L. S. Watson Card Clothing Company of Leicester.

George H. Cutting & Co. of Worcester has been awarded the contract, by the Pacolet Manufacturing Co. of Spartansburg, S. C., for the construction of its mammoth Number 4 mill.

The same concern has already done nearly three-quarters of a million dollars' worth of work for the Pacolet concern, but barring the erection of the concern's Number 3 mill, a year ago, the present contract is the biggest contract given by the Pacolet Co.

The building will be of typical southern mill construction, 550 feet long, 105 feet wide and four stories high. The building will have a capacity of 35,000 spindles.

Brigham M. Scott, for many years with the firm of Duncan & Goodell Co., corner of Main and Pearl streets, has been elected president of the corporation, to fill the vacancy caused by the death of Harlan P. Duncan.

The Worcester Electric Light Co. has ordered of the Stewart Boiler Works of Worcester twelve tubular boilers, to take the place of the present battery of ten boilers, which have been in use for fifteen years.

The Co-operative Builders' Finish Co. has leased of James E. and Arthur E. Estabrook, for five years, the three-story building at 51 Hermon Street, last occupied by the Worcester Thread Co.

Mr. S. R. Heywood, president of the Heywood Boot & Shoe Co., sent his check for $100 to the relief of sufferers of the explosion of the Grover factory in Brockton.

The programme for commencement week at Clark College is now ready to be announced. At the exercises on commencement day, June 21, President Theodore Roosevelt will be present and award the diplomas. Hamilton Wright Mabie will deliver the commencement day address. The exercises will begin at ten o'clock, and their chief features will be the address of President Roosevelt, the commencement day oration by Dr. Mabie, the conferring of the degrees by the President, and music by the Glee Club. Wednesday afternoon there will be organized an Alumni Association.

It has been decided to hold the exercises in the college gymnasium instead of in Mechanics Hall, as was contemplated. There will probably be about forty students to graduate this year, the first year in the history of the college that a graduation has been held.

The J. W. Bishop Co. on Foster Street has been awarded one of the biggest building contracts of the year, calling for the construction of a $200,000 mill for the Bigelow Carpet Co. in Lowell. It will be of brick, 225x60 feet, seven stories, of heavy mill construction. There will be used in its construction 3,500,000 bricks.

The Worcester Pressed Steel Co. will build a rolling mill in Greendale, 200x90 feet. The mill building will be two stories, with a gallery construction. Nearly the whole of the third floor in the front of the building will be used for office purposes. The construction will be along the most approved lines, and will be entirely of brick and wood. The plant will have a very large window capacity with monitor roof, thereby insuring ample light in every portion of the floor. It is expected that the new buildings will be ready for occupancy by August, and possibly shortly before.

Mr. P. E. Somers, tack manufacturer on Hermon Street, has completed plans for a building on Lagrange Street at an estimated cost of $12,000. Mr. Somers' business has outgrown its present quarters and will have a factory of his own.

The Central Building Co., 58 Front Street, has been given the contract for a $50,000 building for St. Lawrence University at Canton, N. Y. The plans were made by Frost, Briggs & Chamberlain and the contract was awarded by Rev. Dr. Almon Gunnison, president of the University. The concern has just completed a $300,000 building for the Springfield Fire Marine Insurance Co. in that city, and has been awarded a contract for a $50,000 building for the Whitinsville National Bank.

W. F. Simonds of Worcester has been awarded the contract for the erection of the mill for Channing Smith at Cherry Valley.

The mill building is to be an addition to the Bottomly mills at Cherry Valley, and is to be used for the manufacture of woolen goods. It will be of brick, 60 by 120 feet, three stories high, with a basement. There will also be an office building, 20 by 30 feet, connected with the main building and a new power plant, 45 by 50 feet, with a chimney 100 feet high. The basement of the main building will have a large machine shop, and the three floors will be filled with looms for the manufacture of woolen goods.

Work has been begun on remodeling the first floor of the building at 6 Barton Place for the new government bonded warehouse. The work is being done by J. W. Knibbs, lessee of the building.

The floor is to be divided into two sections by a partition, and will be painted and whitewashed so as to make the rooms brighter. There will be eighteen electric lights.

Friends of Edward Winslow Lincoln, from 1870 to the time of his death in 1898 chairman of the Parks Commission, are planning to secure by popular subscription funds for a substantial memorial at Elm Park. The idea is a gate at Elm Park, which was Mr. Lincoln's creation. The amount desired to be raised is $650 and the treasurer is Mr. Lincoln N. Kinnicutt.

J. W. Bishop Company has been awarded the contract for building a clubhouse at Harvard University for the Phi Delta Psi. The building will cost $30,000. James Purdon of Boston was architect. The same contractor will make alterations on the residence of John Lowell, a Boston attorney, at Chestnut Hill. Guy Hill of Boston is architect. The improvements will cost $5000.

Hon. William A. Lytle, of the Governor's Council, will attend the Lewis & Clark Exposition at Portland, Oregon, as a representative of the Commonwealth. Senator J. P. Munroe, of the Legislative Committee on Federal Relations, will also represent the State. Hon. John R. Thayer is to be the orator on Massachusetts day.

Plans have been prepared in the draughting room of Reed & Prince Manufacturing Co. for an addition to the company's plant on Duncan Avenue. It is uncertain, however, how soon the addition will be built. The addition may not be built until next year.

The plans provide for a four-story building, 65 by 70 feet, and a one-story brick building, 135 by 58 feet. The total cost of construction of the two buildings will be about $30,000. The larger building is to be for the drawing of wire, and the smaller for wire cleaning.

The Washburn Shops have taken a contract for building a new rotary press, which is designed for printing two or more colors simultaneously and also for numbering at the same time. This press is of entirely new design, and in connection with its construction a study will be made of the various operations required in the manufacture of each part. All the necessary jigs and tools for duplicate work will be designed and constructed, and all the patterns, castings and forgings for the first machine will be made at the shop. In the construction of the press student work will be used as far as possible, and it is expected that a great amount of educational value will be developed for them as the work progresses. It is confidently believed by the firm which is ordering the press that this will mark a new and distinct advance in color printing, and the highest possible degree of mechanical skill will be needed in carrying on the work. An important part of the contract is the requirement that all the patterns for the various parts of the machine shall be carefully worked out, so that, after the first machine has been completed, duplicate parts in great numbers can be manufactured and subsequent machines can be constructed from them, probably in some large shop where the work can be done in less time.

Of the seniors who are to graduate from the electrical engineering department at the Polytechnic Institute this year, the following men have already accepted positions with the General Electric Co., Schenectady, N. Y.: F. B. Clapp, A. M. Holcomb, E. E. Loomis, A. W. Morse and J. W. Stone. The following have accepted positions with the Westinghouse Electric & Manufacturing Co. at Pittsburg: C. W. Drake, C. H. Gilbert and E. G. Scott. Of these three men, two, C. H. Gilbert and E. G. Scott, will return to the Institute for graduate work next year. L. S. Ford will be connected this summer with the Stanley Electric Co. at Pittsfield, and will also return to the Institute next year for graduate work. J. A. Johnson and C. B. Starbird have positions with the Niagara Construction Co. at Niagara Falls. L. A. Magraw will be with the Crocker-Wheeler Electrical Co., Ampere, N. J.; E. C. Morse with the Worcester Pressed Steel Co.; W. C. Redding with the Worcester Consolidated Street Railway Co.; A. M. Thompson with the American Telephone Co. in Boston; and C. H. Tower will be engaged on power transmission work in the western part of the State. Of the men last mentioned, E. C. Morse and W. C. Redding will also return next year for graduate work at the Institute.

THE WORCESTER MAGAZINE

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The Population of Worcester.
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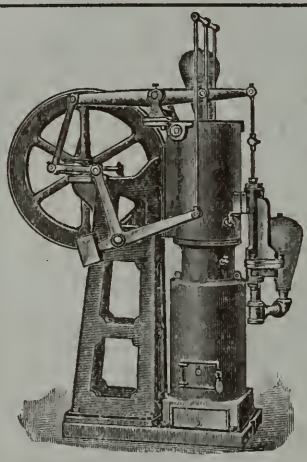

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PRESIDENT ROOSEVELT'S VISIT TO WORCESTER.

The Worcester Magazine.

VOL. VIII. JULY, 1905. NO. 7.

This magazine is published by the Worcester Board of Trade. Its reading pages are devoted solely to municipal development, good citizenship and the business welfare of Worcester. Space in these pages is not for sale.

MAGAZINE AND MUNICIPAL COMMENT.

Style of Bridge Reported

The work of the Lake Quinsigamond Bridge Association in deciding upon a style of structure, settles one of the most difficult features of that proposition. For more than a year a committee of this association, including Hon. Stephen Salisbury, Hon. Joseph H. Walker, Hon. A. S. Roe, Hon. Francis A. Harrington, Hon. Walter H. Blodget, Mr. James Draper, Mr. Arthur M. Stone, Mr. Stephen C. Earle and Mr. Herbert A. Maynard, the latter of Shrewsbury, has worked out a detailed plan of a bridge. It has had the assistance of City Engineer F. A. McClure and other authorities on bridge questions. At a recent meeting of this committee, of which Mr. Earle is chairman, an exhaustive report was made and a concrete-steel style of bridge was recommended. The Magazine this month publishes a portion of that report together with a statement of the builders of bridges of this kind. Although the progress made seems slow, there is reason for congratulation that so much has been done. There is no question that Worcester, within a few years, will see the Lake—the most beautiful water park in New England—spanned by a bridge and the ugly causeway, a disgrace to the city, done away with. The State Park idea should not be lost sight of, but aside from this phase of the proposition, with the growing interest that is manifested in this beauty spot, a bridge must eventually come.

When Done, Do it Right

The Worcester Grade Crossing Commission, after a long delay, has resumed work, with Judge James H. Flint taking the place of Judge Henry P. Moulton, who died during the winter. A preliminary hearing was held in Boston two weeks ago and it was decided to come to Worcester, Friday, July 14th. This visit is to take a view of Harding Street and vicinity, the plan for the new station providing for the extension of that street to Front Street. A hearing will be given at that time to any persons who are opposed to this part of the plan. After that hearings will be resumed September 25th, and probably continued until the grade crossing proposition is cleaned up. Whatever else the city does, it should insist on an interior plan providing for waiting rooms, ticket offices, etc., on the same grade as the tracks. There should be no separation of grades within the station. Such a plan can be made, at the same time eliminating the grade crossing feature, which the city wants to get away from and for which the city is making this struggle. Although it is probable that

no hearing can be had in the matter of grades until the railroads interested present their detailed plan, yet, when this hearing does come, Worcester, which is to pay a part of the expense of the new station, should have something to say as to details and the convenience of the public. At the present time the city appears to be ready to take anything the railroad will give it, including a part of the assessment of the cost of this station. Somebody should wake up and make a demand for something that is reasonable, convenient and right.

From Associate of Senator Hoar

The Senator Geo. F. Hoar Memorial Fund, of which the treasurer is Mr. Charles M. Thayer, has received a contribution of about $1200 from the children of the public schools, in addition to liberal contributions from other sources. The most notable contribution came from Vice-president Charles W. Fairbanks of Indiana, an associate of Senator Hoar in Congress, and an admirer of the Massachusetts statesman. His check for $100 was accompanied by the following letter:

Charles M. Thayer, Esq., Treasurer Hoar Memorial Fund, Worcester, Mass.

My dear Mr. Thayer: I am very glad indeed to see that the neighbors and friends of the late Senator Hoar will take steps to pay fitting tribute to his memory. He was one of the best men this country has produced, and worthy in the fullest measure of some permanent testimonial of the high esteem in which he was held by his contemporaries. His life was essentially devoted to the public service. He consecrated himself to the welfare of the State with undivided allegiance.

I take pleasure in enclosing herewith a small contribution to your fund.

Very truly yours,
Charles W. Fairbanks.

Worcester Children Educated

The Legislature passed a law at its last session which will affect many cities and towns in Massachusetts. On account of its high standard of education and strict enforcement of all educational laws, Worcester will not seriously feel the effect of the new illiterate children law.

After January 1 cities and towns will be obliged to retain in school all illiterate children under the age of sixteen instead of under the age of fourteen, as heretofore. As "illiterate," under the statute, is held to mean the inability to read and write simple sentences in English, no matter what one's foreign education may be, the law will have a considerable effect in some of the mill cities.

In Haverhill alone it is estimated that fully 250 children of foreign birth or parentage will have to come out of the mills under the new law. The problem is financial as well as educational, as some of the cities have not provision for these additional pupils, and must provide more school room. Undoubtedly the law is a wise one, but its practical operation is likely to cause some difficulty at first.

Taking the Census

Worcester census enumerators are, in common with those of other cities, having their troubles in gathering the required information. Some of them complain bitterly of being "sassed" by persons who are unaware there is a heavy fine attached to refusal in giving the information the State demands. The majority of our people, in more than the proportion of ninety out of every hundred, really assist the work of the census-taker, as experience has proved. They understand that census-taking in its commonest aspect is a political function for a political purpose, as upon the enumeration is based the redistricting for the Legislature where the State makes it for itself, and that similarly upon the Federal census depends the Congressional apportionment. Of late years the census has become more than an enumeration. It is conducted to show what are the social conditions of the people, and it is in this field of their work that the census-takers have heretofore met with the most of what little opposition they have encountered.

This opposition is based on the absurd suspicion that somehow the Census Bureau may allow the information to leak out to the detriment or annoyance of the party or parties furnishing it. But, after all, this suspicion has so little strength now that out of some 37,000 mercantile establishments to which

schedules are sent, only about two-score have ever raised any objections to answering them, and the majority of these fall into line on learning that by no possibility can rivals obtain access to the returns, which are so closely guarded that only a joint resolution of the Legislature can open any one of them to scrutiny. Massachusetts, New York, Michigan and Iowa take censuses this year. The promise of all save Iowa is that the enumerations will show a very large increase in population in the last five years. There is reason to expect that the census enumerations will find that Massachusetts has in the neighborhood of 3.200,000 inhabitants.

From Boston to Hartford

By the acquisition of the link in the Worcester & Hartford Street Railway line the Boston & Worcester makes an important addition to its interurban system, and it is promised that within a short time a passenger may go direct from Boston to Hartford by trolley, with only one change of cars, while possibly there may be a through car from Boston to Hartford. This is trolley development on a scale undreamed of by the builders of Massachusetts street railways a dozen years ago. Worcester will benefit considerably by this recent development, as it is now the centre of trolley lines radiating in every direction, and the recent acquirement of the Springfield Eastern Street Railway by the same Boston & Worcester management will shortly bring Worcester into direct and quick communication with Springfield. All this, of course, is only another step toward that Boston-New York trolley line which ultimately will be built. The Boston & Worcester has only to complete its new lines and acquire the link between Hartford, New Haven and Portchester to be able to run cars from Boston into New York without change. The management of the Boston & Worcester road has reason to congratulate itself on its latest acquisitions, and the patrons along the line may feel reasonably sure of an efficient service with every modern improvement and convenience, as the management of the Boston & Worcester road has shown.

Worcester Man for Chairman

In Governor Douglas' inaugural message considerable emphasis was placed upon a desirability to extend the public facilities for industrial and technical education. While many of the Governor's recommendations failed to receive the legal endorsement of the Legislature, this one suggestion found force with the General Court, and that suggestion is an important one. After extended hearings in which manufacturers, educators, representatives of labor organizations and public-spirted citizens generally participated, a commission was authorized with instructions to study conditions in their most comprehensive aspects and report to the next General Court. This is to be known as a State Industrial Commission. Its make-up is as follows:

Carroll D. Wright, Worcester, president of Clark College; Warren A. Reed, justice of the Brockton Police Court; John Golden, Fall River, president of the National Textile Workers of America; Nathaniel I. Bowditch, Framingham, wealthy agriculturist; George H. Martin, Lynn, secretary of the State Board of Education; George E. Keith, Brockton, ex-mayor and shoe manufacturer; Mary Morton Kehew, Boston, president of the Women's Educational and Industrial Union; Simeon B. Chase, Fall River, agent of the King Philip Mills; John P. Murphy, Boston, general organizer of the Boot and Shoe Workers' Union.

In the original draft there was no limit to the amount that might be expended, but amendments were adopted limiting the amount to $15,000, and the payment to any member of the commission to $500. This step is significant because it is in line with the new movement in the direction of industrial training.

The chairman, Colonel Carroll D. Wright, president of Clark College in Worcester, has had an experience that perhaps fits him above any other citizen of the State to give practical and intelligent direction to the work of the commission. In other respects, also, this body seems to be representative in character.

It appears to be a working aggregation, and should it be able to present a

report that is unanimous it would give the main proposition great weight, and furnish a basis for an extension of our educational system along industrial lines. In the months that intervene before the meeting of the next Legislature there will be a large amount of testimony to be taken, and much careful study, comparison and discussion of conditions to be gone through. The time is none too long for the service required, especially when one considers the varied and complex character of our industries.

Growth of Textile Schools

Commencement exercises have taken place in the textile schools in Lowell, New Bedford and Philadelphia. Each school graduated an increased number as compared with other years. It was only a few years back, not three decades, since the first textile school in this country had its inception. The Philadelphia Textile School was born under adverse conditions, and had it not been for the enthusiasm and persistency and the determination of a few men, this school would not at that time have been organized.

It was an innovation that the manufacturers did not appreciate. The industry had run along for years without any technical instruction other than that which could be received in the practical operation of the mill, and the conditions were seemingly satisfactory. Then why disturb them?

The whole aim and object of the school was to better and improve the textile industry, and this is what it has done. The bare fact that Massachusetts has generously given her support to the establishment of the schools at New Bedford and at Lowell must be taken as a tangible acknowledgment of the work done at Philadelphia, as a demonstration of the need of technical textile schools.

The success of these schools may be taken as evidence of the growing need of a larger and a profounder technical knowledge of manufacturing, the need of a knowledge of the theories, the underlying principles of manufacturing. This fact is becoming accentuated with the recurring years, and while there may be some hesitancy on the part of some manufacturers in contributing toward the continuance of these schools, this hesitancy is growing less and less, and the time is rapidly nearing when progressive manufacturers will recognize that there should be set aside each year a certain fund to be given to the advancement of technical education.

Call in Mothers as Experts

Chicago is going through a warm weather agitation over the adoption of a design for a city seal. The whole affair has assumed farcical proportions, and attracted much comment from various sections of the country. The design as accepted for the city seal is an "infant sleeping in a shell." The infant is sitting upright, with legs crossed and dangling in the air. Chicago officials have called in experts, who insist that a baby cannot sleep in this position. It may be an unscientific and unhealthful attitude to assume if one would be refreshed by sleep. If Chicago officials would call in a few mothers and nursery maids, and ask their opinion on the matter, they would have something reliable to guide them; such witnesses would testify that no position has yet been discovered in which a baby cannot and will not sleep, and further that when it seems to the watcher to be in the most uncomfortable of them all, it is getting its sweetest and longest nap.

Auditor for Three Years

The Legislature passed a law at the last session giving the voters of Worcester a privilege of saying whether the city auditor shall be elected for one or three years. Perhaps the taxpayers of Worcester will be satisfied if the City Council will elect an auditor for any length of time.

HONORARY DEGREE FOR THE PRESIDENT.

PRESIDENT THEODORE ROOSEVELT has twice honored Worcester with a visit since he occupied the chair of the nation's chief executive. The first visit was in September, 1902, when he was the guest of the city on invitation of Senator George Frisbie Hoar. The second was Wednesday, June 21, when he came as the guest of Clark and Holy Cross colleges on the occasion of their commencement.

Clark College, which is the preparatory department of Clark University, graduated its first class, and in addition to this important event, the degree of Doctor of Laws, *honoris causa,* was conferred upon President Roosevelt by Clark University. This was done by President Carroll D. Wright of Clark College, who is also a member of the university faculty. As President Roosevelt was the guest of the college, the conferring of the degree by President Wright, instead of President G. Stanley Hall, of the university, was by courtesy. It was also the first degree that has been conferred upon President Roosevelt by a university, which made of the occasion a particular importance.

At Holy Cross College, President Roosevelt planted the elm which is to bear his name, and was greeted as the first president to visit the institution.

The enthusiasm and spectacular feature that always characterizes the visit of a president to any city, were in evidence, and the city was in patriotic attire for the distinguished visitor. The reception given him at both colleges was decidedly demonstrative. At Clark College he was introduced by President Wright as "the president," and at Holy Cross College President J. F. Hanselman introduced him as the "soldier of the nineteenth century and the peacemaker of the twentieth century."

In conferring the degree upon President Roosevelt, the following language was made use of by President Wright:

"The trustees of Clark University confer at this time but one honorary degree and that the highest any university can bestow. For this distinction they have chosen Theodore Roosevelt, true reformer, author and historian, soldier, governor, noble successor of a noble line of presidents, peer of the world's greatest executives, peace-maker between warring nations, incomparable public servant.

"By virtue of the authority vested by the Commonwealth of Massachusetts in the Trustees of Clark University, and by them delegated to me, we now create and proclaim you Doctor of Laws *honoris causa,* and by this token invest you with all the dignities thereto appertaining."

The exercises at both colleges were interesting, President Roosevelt making an address at each, although the principal address was at Clark. The commencement orator was Dr. Hamilton Wright Mabie, editor of Outlook. As President Roosevelt took his text from Dr. Mabie's address and in his remarks paid deserved tribute to Dr. Wright, what he did say is of particular interest. He said:

"In what I am going to say now I shall try to do little save add by illustration to the admirable address to which we have listened.

"And while I was listening to it, I kept thinking how what the speaker said applied to the two men because of whom, in addition to my interest in the institution, I have come here to-day, for two years ago Senator Hoar told me that I must promise to come here to greet President Wright at the head of the college here, and I felt that a request coming from such a man and for such a man was one which I could not refuse.

"Senator Hoar, Mr. Mabie, most emphatically realized in his entire life your description of the public servant —and I need hardly say that the public servant needn't in the least be mere in what we call public life—who deserved the highest gratitude from the people

because his work was literary beyond price. It was not only what Senator Hoar did, but what he was that made all men who came in contact with him in public life, feel that they could not afford to lower their ideals, that they could not afford to do what was base or unworthy, from the mere fact of their association with him. Service like that, of course, cannot be paid for.

"I can't speak quite as free as I would like, President Wright, of you. That is, I hope you will live a very long time, and trust it will be long before I am able to speak so of you. But I do wish here to testify how much I have owed to Mr. Wright before I came into intimate personal contact with him in the work of managing the business of the government, and even more after I thus came into close personal touch with him. He, again, gave the kind of service that no money could buy, and it was rendered without thought of material reward. And again, it was not only what he did at the head of his not merely important—I was tempted to say all-important, but of course that would be an exaggeration—at the head of the department which does some of the most vital business of the government.

"It is not only for the service that he rendered at the head of the department, but because of the way he did it; because of what his influence was upon those around him. Now, the greatest problem, of course, before our people, as before every modern people, is the problem of getting justice as between man and man and getting sympathy as between man and man; this especially in industrial matters, so that the man who works with his hands and the man who has the capital accumulated by work with head and hands shall get along better together, each do justice to the other and each have sympathy and regard for the other. For mere justice can be administered in a manner which leaves you with the greatest dislike for the person administering it.

"And I could not dwell too much upon my sense of obligation to Mr. Wright, for the constant aid he gave me and the constant example he was to me, both; the aid he gave me in his actions and example he was in pointing the way which I am sure is the right way for trying to solve some of the great problems that affect us, because of our very great industrial success as a nation during the last half century. And I am very glad, Mr. Wright, to have a chance of expressing a part of the obligation I felt and part of the obligation under which I am.

"Now I don't want to be misunderstood, and I am going to add to Mr. Mabie's thought from what I know. I don't mean for a moment that you should never think of any pecuniary reward. If you don't think of it, somebody else will have to think of it for you. And you will thereby become first a burden and then a curse to those around you. The first duty of each one of you here is to carry your own weight, to carry yourselves. You are not going to be able to do anything for anyone else until you can support yourselves and those immediately dependent upon you. And I do not wish you to develop that kind of idealism which makes you filled with vague thoughts of beneficence for mankind, and an awful drawback to your immediate family. You have got to work for yourselves first, before you can help carry anyone else.

"And I do believe that you have a pretty good work, but do not at all believe that it is the best of all possible work, and I hope that we shall have a certain adjustment of rewards, even those of a pecuniary nature, a material kind. Altogether too much in the way of reward goes to a certain type of financier nowadays, and too little goes to the student, to the scholar, to the teacher, to the men who represent the scholarly side of life, the side of life that is making for and producing work in our nation.

"Now I want to have it understood that I never would have you lose sight of your fundamental duty at the outset, but while remembering that, remember also that it is not figuratively but literally true that the real first-class work cannot be paid for and cannot be done by the man who expects pay for it.

"Mr. Mabie, both you and I come in

that category of men whom a former American statesman alluded to as inadequate literary subjects, and we know that literary work does not in the least depend upon reward. I think Paradise Lost brought Milton ten pounds, if I rightly remember. The price of epics has gone down since then. But it still remains true that Milton wrote a poem for which a million pounds would have been quite as inadequate compensation as ten. There is no monetary value that could be put upon that work, any more than you could put any monetary value upon Homer's work or upon any of the work of the great masters.

"Ruskin said that what counted was the work that was done not for the fee but for the work's sake. If the man works for the fee, he gets what he works for, and that is all. If he works for the work's sake, he leaves mankind his debtor, if he does his work well.

"While it is encumbent upon every citizen of this country to do the best that he is able, not only for his own sake and those immediately connected with him, but for the sake of the people as a whole, yet it is especially encumbent upon the graduate of such an institution of learning as this. Every man that graduates here has received something, and something big, for which he has made no return and for which he can never make a return to the men giving it. It is given in bond by those who are dead, it is given in bond by those who are living, but who cannot ever receive any reward for what they have thus done. You graduates of the college cannot pay back to the founder, to the trustees, to the President, to the professors, what they have done in many an epoch for you direct. You cannot pay it back direct. There is one way, and one way only, in which you can give back to the college, to the university, what you have received from the college and the university, and that is by so leading your lives in point of purpose and in point of efficiency as to reflect honor upon those who did so much for you, as to show that they were right in doing what they did, that their effort was not wasted when they gave you this great chance. Every college man owes a debt of gratitude to his college which he can pay but in one way, and that is by the way in which through his life he makes that college stand in the estimation of the public.

"I have always felt most strongly that it is true of the nation as of the individual, that the greatest doer must also be a great brain. Of course if the brain is not followed by action, then it is a bubble. Then it is merely something to divert the man from doing something, but great action, action that is really great, cannot take place if a man hasn't had in his brain the power to think great thoughts, to dream great dreams. As has been so well pointed out to-day, the marvelous rise of Germany in the world of industry and no less than that of thought of letters, has been due to the fact that the German was trained in his mind, that he had high ideals, and finally shaped these ideals by practical ways. I am immensely struck, as I think all of us must have been struck, by the way in which a few weeks ago our fellow citizens of German birth or descent, many of whom are in this audience, took part in the services to commemorate the life and writings of Schiller.

"I feel so cordially, as the President of Amherst has manifested, that we in this country, where we are amalgamating into one people many different peoples of many different climes, that here in this country, one of the great works to which we should devote our attention is trying to preserve what each of these peoples can give of value to our national life. Each element can contribute something of value, and contribute very much of value, and it would be a very good thing for all our people if we should steadily shape our development so that it could come as naturally to us as it does to the people of Germany to recognize the incalculable aid to a nation of a writer like Schiller, to a man who again has done work for the public, for his nation, for all mankind, upon which no price can be put. From Germany this country has learned much.

"Germany has contributed a great

element to our people, and it has given the most marked trend for good to our whole scholastic and university system of training students and scholars, and in taking what we should from Germany, from this great kindred nation, I wish that we could take especially the idealism which renders it natural to them to celebrate such an event as Schiller's life and writings, and also that keen, practical common sense which enable them to turn their idealistic spirit into an instrument for producing, to own the most perfect military and industrial organizations that this world has ever seen.

"Again—you see, Mr. Mabie, I am a lecturer making notes on your speech—again just a word about character counting most. Of course it counts most. I believe in a sound body; I believe in a sound mind; I believe in character a great deal more than in either, and I believe in both a sound body and mind chiefly as the foundation for character.

I remember, when I was governor, I had some correspondence with President Hall, and found to my great pleasure that he took the views that I did on the subject of boxing. He is right. We don't want to produce here, especially in an institution of learning, a race of very nice, very cunning, well-bred young men, who cannot hold their own. I don't give the snap of my finger for the young fellow who is afraid of being hurt, physically or in any other way. He is not going to amount to anything in later life. He will be hurt a great deal. You are just entering upon the point of your career when you will get hurt, and if you have got any stuff in you at all, you will face the punishment, take it, and win out in spite of it.

"I want to see the physical development more because of the moral side of it than for any other reason. I want to see the intellectual development only in so far as it is controlled by conscience, by a sense of right and wrong. The better educated a man, the more dangerous he is, if he hasn't got a conscience. Of course that is merely a truism. The educated scoundrel makes a very much worse scoundrel. And in these universities, the chief benefit comes from the education of a man's character as well as of his intellect.

"Of course, there are certain men who do certain exceptional work, as orators, painters, inventors, where it is important that the intellect should be developed to that marvelous point where we speak of it as genius, but with the ordinary man who comes out of one of our colleges, what we want to see is what Senator Hoar spoke of when he said he wanted to see the highest type of citizenship turned out of our colleges. I hope most earnestly for the day when we shall see peace prevail among the nations of mankind, peace industrial as well as military prevail between the nations themselves.

"But peace of the valuable kind comes not to the man who craves it because he is afraid, but to the man who demands it because it is right.

"The peace granted contemptuously to the weakling and the coward is but a poor boon after it has been granted. We must keep our hands upon the essentials and not upon the non-essentials. In 1861, there were people who cried 'Peace, peace!' who said that any peace no matter how shameful, was preferable to the worst of all evils, fratricidal war. And if these people had had their way then, we would have been hanging our heads now, we would now be fearing that this country, founded by Washington, a country that at that time was defended by Lincoln, had gone down in the wreck of an irretrievable disaster and had doomed our history to be thenceforward meaningless and unworthy.

"We got peace then and peace forever, as I believe, in this country, because there are a sufficient number of men who felt, as President Wright felt, the desire for permanent peace. I have no patience with the brawler or the swashbuckler, and I have less for the individual who is afraid of being hurt or has fear of bodily harm. And the nation, any more than the individual, cannot afford to put peace before justice. Put justice first. It will generally lead to peace, but follow it wherever it leads.

"Now, in closing, let me say just one more thing. The same homely virtues apply in managing the life of a nation as in managing an individual's home life. All it needs to do is to exercise common sense and stick close to the golden rule. In other words, a man needs to carry himself in public life as he would in private life, and never make the mistake of divorcing public from private morality. He cannot afford to divorce public and private morality any more than you can afford to divorce your domestic from your business morality.

"The man is a poor citizen, no matter how high he stands in the church, whose allegiance to the teachings of the church is limited to his own home and to Sunday, and isn't carried into his work in his business; and in just the same way, the man is a poor citizen who does not do his best to see that the affairs of his country, both as that country stands to other nations and as that country deals with the matters relating to its own citizen within its limits, are managed on the same lines. And those lines are the perfectly simple old lines of honesty, courage, morality and common sense."

The pertinent points—or gems—of his address at Holy Cross College, are here given:

"I want to see this nation not only strong, but just; and not only just, but strong.

"No amount of patriotism makes a man a good soldier unless he has the fighting edge.

"I wish to see us develop as a nation those qualities which we prize in the individual man.

"Each of us, each stock that comes here, can furnish something of permanent value to the country as a whole.

"I most desire to see the union of a lofty sense of the rights of others, and the power to act efficiently and effectively.

"I want to see in statesmen and in private citizens the same qualities that are to be found in the soldier on pitched fields and in campaigns.

"I want to see in Holy Cross, in Harvard, and of all of the other universities where you can get a chair endowed, chairs for the study of Celtic literature.

"No amount of genuine lofty feeling will help any man to be a good citizen if his only way of showing that feeling is to sit at home and say how badly other people do the work.

"I feel it is not a creditable thing to the American republic, which has in its citizenship so large a Celtic element, that we should leave it to German scholars and students to be our instructors in Celtic literature.

"I do not wish to see in politics two entirely separate groups, one composed of the men who mean well and cannot do anything, and the other of men who are thoroughly efficient, but who don't mean well at all.

"It is eminently characteristic of our nation that we should have an institution of learning like Holy Cross, in which the effort is consistently made to train not merely the body and mind, but the soul of man, that he shall be made a good American and a good citizen of our great country."

THE POPULATION OF WORCESTER.

THE work of the census takers is now nearly completed, and in the course of three or four weeks the population of the State of Massachusetts for the year 1905 will be announced. Probably the population of the city of Worcester is the element of the State census which possesses the greatest interest for the readers of this Magazine, and an attempt to predict the correct figures may be of sufficient interest to warrant the publication of certain results which the writer has obtained.

The law of the growth of population in any community of considerable extent is quite regular in its working. An examination of the records, for any considerable number of years, of the population of the State or of the United States, enables the investigator to deduce an empirical law, which will apply quite accurately to the future as well as to the past. In the case of old and well established cities also, the same kind of forecast can be made, though not with anything like the same degree of probability. Any community which is limited in number or in geographical extent is likely to be influenced in a more or less violent manner by industrial conditions. It may experience an abnormal increase or decrease in rate, or even a decrease in actual population, through the establishment or the removal of some important branch of manufacturing; while the population of the State, or of the country as a whole, is not at all affected by this cause, the gain or loss in one community being offset by a corresponding loss or gain in some other community.

The growth of the city of Worcester has, however, been remarkably free from such variations, and the industries are so diversified that any loss in one direction is likely to be made up by a gain in some other direction. This fact made it seem probable that a law for the growth of the city could be determined. Accordingly the problem was attacked five years ago by Dr. T. C. Mendenhall, at that time President of the Worcester Polytechnic Institute, and a formula was deduced from which the population of the city for the year 1900 was predicted. The figure announced was 114-511, and the result of the national census was awaited with considerable interest to see how closely the actual population would conform to that predicted from theoretical considerations. The result, according to the census, was 118-421, an excess of nearly 4000 over that obtained by Dr. Mendenhall, and some surprise was felt at the time by those interested, who were unable to account for this wide discrepancy.

A general interest in the subject has impelled the writer to investigate the whole subject anew, and to deduce independently the law of the growth of Worcester, for the purpose of predicting the population for 1905, and also for any year in the near future. The method of work and the results obtained are as follows:

A general formula which expresses quite accurately the law of growth of population is the well-known equation—

$$P=k+at+bt^2+ct^3$$

where P is the population, k is a constant whose value is to be determined, t is the time after any selected epoch, and a, b and c are constants whose value is to be determined. The year 1800 was chosen as the epoch from which the time was reckoned, the constant k was found to be 2411, and for the computation of a, b, and c the following figures were available:

Year.	Population.
1800	2,411
1810	2,577
1820	2,962
1825	3,650
1830	4,173
1835	6,624
1840	7,497
1845	11,556
1850	17,049

1855	22,286
1860	24,960
1865	30,055
1870	41,105
1875	49,317
1880	58,291
1885	68,389
1890	84,655
1895	98,767
1900	118,421

From this material nineteen equations were formed by substituting in the general equation just mentioned, and by the method of least squares these nineteen equations were reduced to the three following equations:

$$715a+55{,}090b+4{,}516{,}150c=502{,}954$$
$$551a+45{,}162b+3{,}854{,}080c=431{,}276$$
$$452a+38{,}541b+3{,}382{,}111c=379{,}780$$

Solving these three equations for a, b, and c, we then have for the equation representing the population at any time—

$$P=2{,}411+32.32t-2.143t^2+0.1324t^3$$

Substituting 105 for t, since the current year is 105 years after the reference date, 1800, we have as the probable population of Worcester in

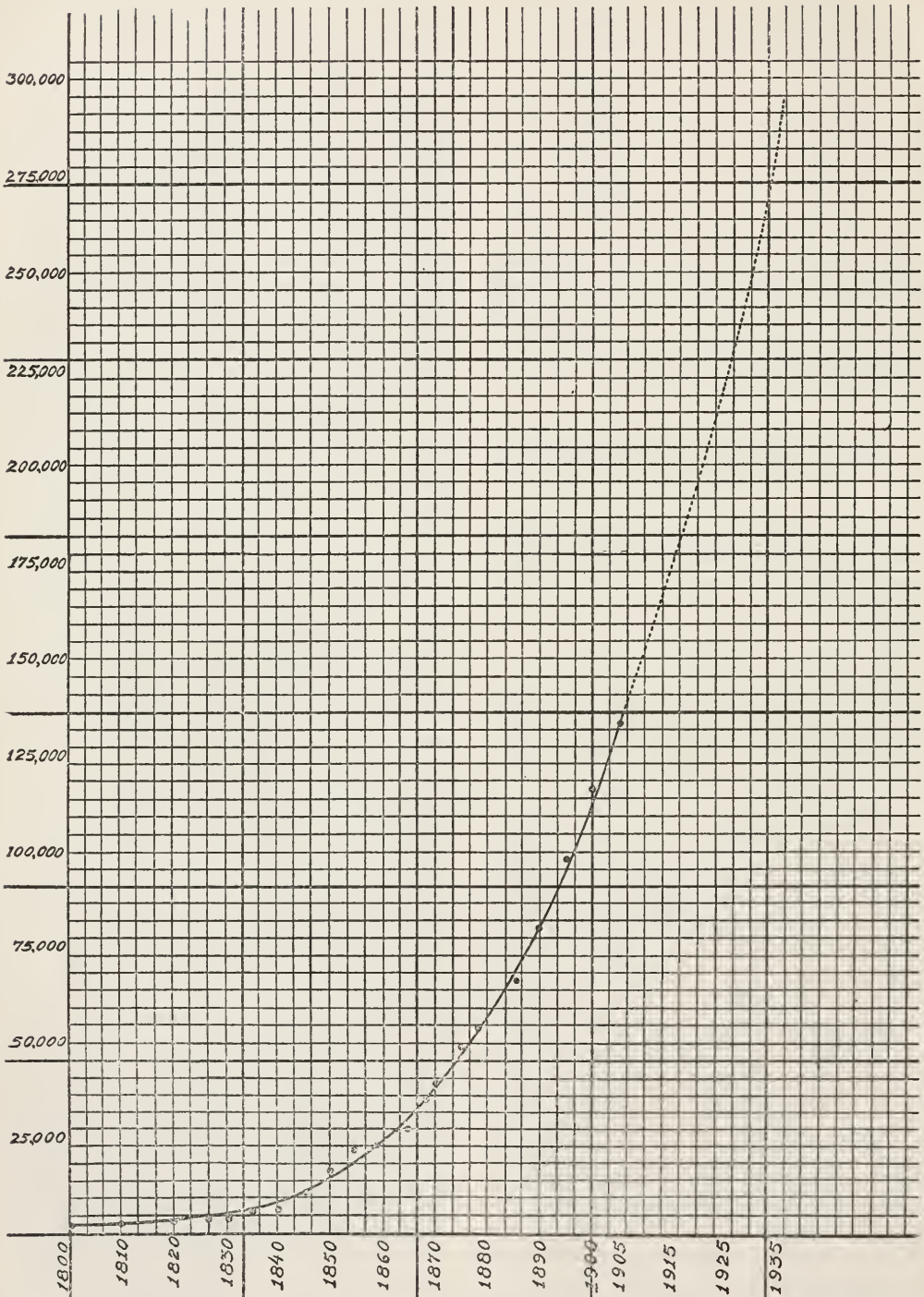
1905	135,448

The continuous curve in the accompanying figure gives the theoretical population, and the dotted line which accompanies it shows the actual population at any date during the nineteenth century. The agreement is close throughout the entire century, and the differences between the two curves call for no comment except in one particular, that which is to be noted in connection with the year 1900.

As already stated, the difference between the predicted and the actual population for that year, nearly 4000, was great enough to occasion some comment; and the question now arises, Will the predicted figures for 1905 be exceeded in the same way by the actual census figures soon to be published? This question can not, of course, be answered definitely, but certain general statements can be made in connection with it with some degree of safety. From 1895 to 1900 the increase in population of this city was almost exactly 20 per cent. If the same percentage holds for the increase from 1900 to 1905, the population of Worcester is now in the neighborhood of 142,000. But an increase of 20 per cent. in five years is an abnormal increase, and no such rate of growth can be maintained permanently. The unexpected increase which occurred during the last few years of the last century is probably to be explained by the enormous development in the iron and steel industries of the United States. The industries of Worcester are of such a nature that they would be greatly stimulated by national development along these lines, and the result would show quickly in the increase of population. If during the past five years there has been an increase correspondingly great in the manufactures of the city, then the population may be found to have passed the 140,000 mark. But this is hardly to be expected. While there has been healthy growth since 1900, this growth does not seem to have been abnormal; and a much safer estimate will be one which places the population not far from that indicated by the curves shown in the figure.

No inconsiderable portion of the interest attaching to any problem of this kind lies in the opportunity it gives for forecasting the future. It would be rash to attempt to predict the population of Worcester for the year 2000, but prediction can be made for a limited period of time with a high degree of safety. Any law like the one under consideration, which has operated without any material deviation for a century or more, will probably continue to operate for the next thirty years without any sensible change. Exception must of course be made for the working of any abnormal conditions, the occurrence of which can never be predicted. Computation, according to the law already worked out, gives for the years 1915, 1925, 1935 the following probable populations:

1915	179,149
1925	231,560
1935	293,471



Population of the City of Worcester, 1800 to 1935.

These results are shown graphically by the broken portion of the population curve in the figure.

If these forecasts are actually verified, and it is altogether probable that they will be, the population of Worcester thirty years from this time will be approximately 300,000.

Figures indicating a growth such as this deserve the most careful study from those who are in charge of the various departments of the city government. The history of municipal government in this as well as in every other country, the history of the municipal government of Worcester itself, is bristling with errors, many of which might have been avoided if proper forethought had been displayed by those who had taken upon themselves the grave responsibility of attempting to serve the city in an official capacity. Provision for public schools, for water supply, for sewage disposal, and all the other problems confronting the city, should be treated from the standpoint of the future as well as of the present. Twelve-inch water mains, to take a single illustration, should not be laid where, ten years later, they must be dug up and thirty-inch mains laid in their place. Old inhabitants of Worcester can remember errors of exactly this nature, and a series of valuable and interesting reminiscences might easily be furnished by some of those who have watched the growth of the city for the last half century; reminiscences which might be studied with profit by those who hope to witness its growth for the half century which is immediately before us.

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CONCRETE-STEEL BRIDGE FOR THE LAKE.

WHILE the Commonwealth of Massachusetts is considering extensive improvements for its public reservations, and adding to them from the western part of the State, the proposition to make a state park of Lake Quinsigamond should not be permitted to drop out of sight.

Such a proposition is practical, for there is no more beautiful water park in the United States and, as such, needs first of all a bridge to span this beautiful sheet of water—a bridge to replace the causeway and to be a credit to the city. In the matter of public parks there is before the Legislature, to be considered next year, a petition asking that the State set aside Mt. Sugar Loaf, at the head of the broad middle valley of the Connecticut River, where it swings out from the east between the big hills. The view from this mountain is said to be beautiful, and because of this feature the State park idea is suggested. As a mountain park the State has taken Mt. Wachusett, and it has no inland lake or water park.

Central Massachusetts is entitled to some consideration from the State in the matter of public reservations. For several years there has been an agitation for a bridge to span this beautiful sheet of water, but jealousies and lack of public spirit have delayed progress in this particular.

Under the caption of "A Standing Disgrace" the Worcester Gazette discusses the bridge proposition as follows:

"The opening of the canoeing season at the lake this year again brings into the near perspective the question of a bridge at the present site of the causeway. Year after year the same old question bobs up, is agitated for a brief space and falls back again into the mire of procrastination. Each summer finds the old causeway still in place, defacing the landscape and blocking the course of vessels of all descriptions and sizes except the smallest. The presence of the causeway in the lake practially limits the size of vessels in use there to the dimensions of the tunnel-like passage at the western end of the causeway. This passage is

precarious even for small craft, because of the liability of collisions in the confined space beneath the bridge.

"Aside from the inconvenience to pleasure craft, however, and the limiting of rowing contests to either one end or the other of the lake, there is a much more serious consideration involved in the retention of the causeway in its present location. The Gazette has often called attention to the fact that Belmont Street is the principal and, in fact, the only considerable eastern route into the Heart of the Commonwealth from the east and out of the city to the towns lying eastward of Worcester. Belmont Street is the main highway between Boston and the Connecticut valley and the sections farther west. With the rapid increase in automobile traffic in this part of the country, Belmont Street is becoming increasingly important. Practically all the through automobile traffic between Boston and Springfield and a great part of the through traffic between New York and Boston passes through Worcester, entering or leaving the city over the causeway. In its present condition the causeway is a standing disgrace to the city of Worcester.

"To the average citizen, accustomed to seeing the causeway in its awkward position, dividing the lake in half, there may not be anything out of the way or incongruous in the present state of affairs. The causeway has been right where it is for years. It has become a part of the landscape, a natural feature of the scenery. But to the unaccustomed eye of the visitor the causeway is a rude shock and a cause of sarcastic remark on things in general in Worcester. First impressions are always the more lasting. If the visitor to Worcester approaches the city from the east, therefore, across the causeway and through Shrewsbury Street, his ideas of Worcester are liable to be not of the most favorable. Thereafter, wherever he goes, he will spread the story that the Heart of the Commonwealth is hardly the place to look for a pleasant location.

"There is no good reason why Worcester should be dirtier or less handsome than other cities. The natural environment of the city is one of the most beautiful in the United States. The removal of a few defects, such as the causeway, and the rebuilding of Shrewsbury Street, would go far to make the Heart of the Commonwealth harmonize with its environment and become one of the most attractive home cities in America."

The Lake Quinsigamond Improvement Association has kept up its work and agitation in the interest of a bridge at the lake. A year ago a committee was appointed to consider the style of bridge desired. City Engineer Frederick A. McClure gave the committee considerable assistance, and Mr. T. J. Sawyer has been interested in the work. This committee, of which Mr. Stephen C. Earle was chairman, has made a report upon the style of bridge desired, from which the magazine makes the following extract:

"Probably all will admit that a bridge across Lake Quinsigamond, in place of the present causeway, is greatly to be desired, but, desirable as it is, it is a matter of such importance that it behooves us to give the subject the most careful consideration before committing ourselves to a definite programme. The committee has, therefore, confined its work to the determination of the kind of bridge to recommend, and if the suggestion now submitted meets with the approval of the corporation, the committee, if so instructed, will proceed with its work and be prepared with a definite programme to submit at a later meeting of the corporation.

"In making a decision as to the kind of bridge that should be built there are, among others, four considerations of supreme importance: the roadway, the waterway, strength and durability, and beauty. The various kinds of bridges suggested have been considered with reference to these points. First, there is the suspension bridge, which answers well the requirements of roadway and waterway, but it cannot be classed as a permanent structure, and entails great annual expense for painting and other repairs, while nothing can be said in its favor on the score of beauty. A steel arched bridge would satisfy all the requirements as to roadway, and could be

made to give satisfactory waterway, but here again we have to meet the fact of steady deterioration and a great annual expense for painting. As to aesthetic qualities very little can be said for it. It is doubtful, indeed, if an iron bridge can be made monumental.

"The above-mentioned forms of bridges then failing to meet requirements, we next turn to the bridge of masonry. This, of course, gives a basis for the most perfect roadway, and is not incompatible with a satisfactory waterway, while it can be made permanent and free from the need of frequent repairs, and admits of being made so as to be among the most beautiful and monumental structures which it is possible for man to rear. In the many kinds of masonry and the various forms that a long masonry bridge may take, that of many massive piers and arches is the most natural one, and is capable of great beauty, but in our case wide spans are necessary to give satisfactory waterway. These may be secured by using concrete masonry, reinforced by steel, thus greatly reducing the mass and weight, and likewise the cost. The concrete may be used for the body of the masonry, with facings of granite or other stone, or it may be used for the entire masonry without the stone facing. There are some advantages in using the facing besides that of the question of beauty. Of course, in using stone facing there is unlimited opportunity for artistic effect which is not possible with the use of concrete alone.

"As a conclusion, therefore, the committee recommends a bridge of steel and concrete construction, with three arches of 180 to 200 feet span between the island and the east shore, and one similar span between the island and the west shore, with a clear headway above the water of 30 feet or more, and a width of 80 feet. The question of plain concrete, or concrete with a stone facing, is left open for further consideration.

"While concrete and steel construction has been in use a comparatively short time, many of the great railroads have adopted it for their bridges in replacing the steel structures which are slowly but surely losing their strength, and are requiring thousands of dollars yearly for their maintenance.

"While steel concrete construction is modern, the use of concrete is far from being so. The Romans are supposed to have been the first to use it extensively, and they have left us a most notable example in the Pantheon built before the Christian era, still in perfect condition, and having been in constant use through all its history. The great dome 142 feet in diameter, together with the circular walls, stand to-day without cracks or any evidence of deterioration, having resisted the attacks of time for nearly two thousand years. Castle walls, fortifications and foundations were constructed of concrete in many parts of the world, as in Greece, Italy, Germany, Spain and even in Mexico there is evidence that as a building material concrete was known and largely used many hundred years ago. Moreover, this concrete was all made with lime, for our modern Portland cement was unknown until after the beginning of the nineteenth century."

From the correspondence between the committee and the Concrete-Steel Engineering Company of New York, the following descriptive paragraphs are contributed:

"We perfectly agree with your city engineer that a concrete-steel bridge would be the proper bridge to build at that location. A concrete-steel bridge has the same beauty and durability as a stone bridge, and costs little if any more than a good steel bridge. The strength of concrete increases with age, and its durability is not exceeded by granite. The steel ribs embedded therein are protected from oxidation by the concrete, and will last forever. Contrary to stone arches, or concrete arches without steel re-enforcement, the concrete-steel arches cannot crack, even though the bridge is built on soft foundation, or exposed to great change of temperature. Concrete-steel bridges are therefore gaining in favor every day, and we believe the time is near at hand when they will be built to a greater extent than steel bridges. The first concrete-steel arch bridge in the United States was designed by us, and built at Rock Rapids, Iowa, in the spring

of 1894. Since then hundreds of concrete-steel bridges have been built throughout the United States. We own the patents for such structures, and by reason of giving our whole time to such structures we feel particularly well qualified to design them, and have designed fully 95 % of all the concrete-steel bridges that have been built or are now in contemplation in the United States. We are not contractors, however, but charge a fee for plans, specifications and royalty to be placed on file for competitive bidding, in order that the community where the bridge is built may be in a position to accept the lowest and best bid. The bridge in Dayton, Ohio, to which you refer, and which cost about $130,000, has proven so satisfactory to the city authorities that they have retained us to design a second still larger bridge to be built there next year.''

WORCESTER BOARD OF TRADE.

BANK BUILDING, 11 FOSTER STREET.

OPEN 8.00 A.M. TO 5 P.M. PRESIDENT'S HOURS: 1 TO 2 P.M. MONDAYS, TUESDAYS, WEDNESDAYS AND FRIDAYS.

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The Worcester Board of Trade wants to keep on file at the Secretary's office a complete list of places where floor space can be secured for manufacturing and business purposes. There are calls made every day for such information. The Secretary would appreciate it if every owner of a building in Worcester used for manufacturing or mercantile business would furnish particulars of what he has for renting purposes, and if land-owners would also file a list of available building sites. State owner, location, whether store or factory, amount of floor space, amount of power available and approximate rental. If it is land for manufacturing purposes, state owner, location, number of square feet, general dimensions, any building thereon; if so, give floor space, number stories, brick or wood, power plant with horse power, and purposes last used. Also give name of railroad near it and side-track facilities. Give price that can be used as basis of negotiation.

This information is for the use of the Secretary, and is not to be used for any purpose except to locate new or present business interests. No compensation is to be asked for any lease or rental that may be brought about by the Board of Trade.

This is my first visit to Worcester, and I am much impressed with the enterprise of the place. I should judge that it has a splendid future.—Justice David J. Brewer of United States Supreme Court, in an interview.

A historical note: The Worcester turnpike was opened in 1808.

The directors of the Board of Trade had their last meeting for the summer Thursday evening, June 8. President H. W. Goddard presided and made the following appointments of committees:

Advisory Committee—Rufus B. Fowler, Hon. Walter H. Blodget, Hon. Stephen Salisbury, Charles H. Morgan, Samuel R. Heywood, Hon. Joseph H. Walker, William E. Rice, Joseph R. Torrey, Hon. Augustus B. R. Sprague, Hon. Henry A. Marsh, Orlando W. Norcross, Dr. G. Stanley Hall, G. Henry Whitcomb, Matthew J. Whittall, C. Henry Hutchins, A. George Bullock, Francis H. Dewey, Edward I. Comins, Arthur M. Stone, Hon. Edwin T. Marble and Dr. Carroll D. Wright.

Ways and Means—William H. Coughlin, Walter M. Spaulding, Henry S. Pratt, Hannibal A. Johnson, Herbert H. Fairbanks, Frank A. Drury and Alfred S. Lowell.

Manufactures—Alfred Thomas, John R. Back, James E. Orr, Clarence W. Hobbs, Alonzo W. Whitcomb, Edwin C. Harrington and George N. Jeppson.

Meetings and Receptions—George F. Booth, Arthur C. Comins, William W. Johnson, Robert H. Chamberlain, Freeman Brown, James Draper, Hon. William A. Lytle, Arthur O. Young, Charles F. Marble, Henry E. Townsend and William H. Coughlin.

Mercantile Affairs—Irving Swan Brown, J. Russel Marble, Otis E. Putnam, Walker Armington, Joseph F. Sherer, E. Avery Brewer, Elbridge G. Guy, James E. Patten, Albert A. Spaulding, Charles H. Carpenter and Arthur R. Haven.

Transportation and Railroads—Paul B. Morgan, William F. Whipple, Charles L. Allen, Reginald Washburn, Pliny W. Wood, Albert H. Mirick, Walter D. Ross and William J. Denholm.

Statistics and Information—Irving E. Comins, George B. Buckingham, Francis E. Olney, Herman S. Hastings, Horace W. Cristy, Howard E. Sumner and Charles H. Pinkham.

Arbitration—George F. Brooks, Marcus L. Foster, Herbert P. Bagley, Walter C. Porter, Walter F. Davison, Fred L. Willis and Samuel D. Spurr.

Legislation—Hon. Rufus B. Dodge, Charles T. Tatman, Burton W. Potter, Dr. Julius Garst, Hon. John P. Munroe, J. Lewis Ellsworth, Julian F. Bigelow and Elmer C. Potter.

New Enterprises—James C. Stewart, John A. Sherman, Charles P. Adams, Arthur W. Parmelee, Charles Firth, Edward J. Cross, Thomas T. Booth, George T. Dewey, Herbert N. Leach and William J. H. Nourse.

Municipal Affairs—Hon. William A. Lytle, William H. Sawyer, Walter E. Bigelow, Thomas T. Booth, Charles H. Pinkham, Richard H. Mooney, William H. Cook and Andrew W. Ekstrom.

Taxation and Insurance—Reginald Washburn, Alexander C. Munroe, Charles E. Grant, H. Ward Bates, Waldo E. Buck and George H. Vars.

Foreign Trade—Charles L. Allen, Ernest P. Bennett, Lewis H. Torrey, Reginald W. Clarke, John W. Higgins and Albert M. Powell.

Publication—Rufus B. Fowler, Dr. G. Stanley Hall, Irving E. Comins, George W. Mackintire and Milton P. Higgins.

Education—J. Russel Marble, William L. Ames, George F. Brooks, Daniel W. Abercrombie and Homer P. Lewis.

President Goddard was given authority to appoint a committee to attend the hearing of the Grade Crossing Commission, in the interest of securing the best plans for public convenience in connection with the new Union Station.

There was referred to the Committee on Legislature the Boutell free alcohol bill, now before Congress. It provides that alcohol for use in manufacturing and the industrial arts shall be free of tax when suitably denaturized or made undrinkable by mixture with noxious substances.

In the endeavor of publishing houses to compile an automobile register and book of general information, Worcester has led them all. The Interstate Automobile Register and Tourists' Guide, published by F. S. Blanchard & Company, is far and away the most complete book of information that has ever been furnished the public. Almost everything an automobile owner wants to know is found within the 400 pages of this register. It represents a year's work of the most careful route finders of New England, and as a gazetteer of cities, towns and villages and official register, it is in complete encyclopaedia form. A feature of this publication, although not advertised as its strong point, is the map of New England. It is mounted on cloth and of sufficient size to clearly show the automobile routes of the New England section. It shows all the county seats, the state lines and railroad lines, and the automobile routes are so plainly indicated, together with the street railway routes, that it would be difficult for an automobilist to lose his way. The book contains over 400 routes given in detail, with distances between cities and towns, condition of routes, general topographical condition of the country, and at the start and finish of each route are given the streets and

landmarks thoroughly familiar to the people of the section through which the automobilist is traveling. There are, besides these, about thirty trunk routes including New York to Bangor, Me., Boston to Montreal—these being named to show the long trip outlined in this book. The New England routes are all alphabetically arranged by the states, and maps are printed of all the principal cities, showing the streets, public buildings and principal automobile stations. There are 173 pages of the book devoted exclusively to routes.

Under the head of "Tourists' Guide" is printed the name of every city, town and village in New England arranged by states, in connection with which is given information relative to post offices, telegraph office, railroad, storage places and agents for sale of supplies, list of hotels with rates and the number of the route leading to the place.

There is an automobile register taken from the official records in the several states, which includes many thousands of owners. The automobile laws of New England states are given in full, and as a directory of automobile and motorcycle manufacturers it is of exceptional value. As a business venture it is one of the most ambitious undertakings this firm has accomplished. It furnishes the automobile owner the information he most desires, enabling him to tour New England, having all the information he needs in the Interstate Register, with him all the time.

The Board of Aldermen gave a hearing on the night of June 12 on the petition of Worcester National Bank and others for the extension of Norwich Street from its present terminus at Mechanic Street to Front Street. The petition contained names of prominent real estate owners and public-spirited men, and the petitioners were represented by Mr. Edward T. Estey. Those who spoke in support of the petition were H. H. Bigelow, J. P. Hamilton, Charles A. Chase, Hon. Stephen Salisbury, William H. Sawyer and Lyman A. Ely. All spoke of the advantages which would come to Worcester. They said Worcester cannot grow in any other direction than in the section where the improvement is suggested. Mr. Chase said the widening of Summer Street and the building of Commercial Street do not relieve the congestion of Main Street, and Union Street is inconvenient on account of its narrowness and the grade near Mechanic Street.

Mr. Sawyer said he favored the extension, not as a property owner, but as a citizen. He referred to plans he has for his property in that vicinity for a large building from Main to Norwich Street, with the rear on Norwich Street, so that the extension of the street would not benefit him.

The only remonstrant was Mr. S. Z. Poli of New Haven, represented by Mr. Charles M. Thayer. Mr. Poli has purchased the Crompton block, which the improvement proposes to demolish. It is the purpose to make a theatre of the block.

Mr. Charles H. Morgan has purchased the John B. Gough estate in Boylston, formerly owned by Mr. William J. Hogg, but more recently by Mr. Samuel Horner, Jr., of Philadelphia. The farm covers 125 acres, and is one of the most desired estates in Worcester County.

Mr. Irving E. Comins, director of Worcester Board of Trade, has gone to Europe for the summer, and is accompanied by his family.

The Ettrick Mills Corporation, Stoneville, Auburn, is making extensive additions to its plant by erecting a large two-story modern carpet mill, with two wings of one story each. Work on the structure was started early in June, and according to the terms of the contract it will be finished by Aug. 1. It will be 196 by 230 feet and, with carpet looms and other machinery, will cost in the vicinity of $40,000. The architects are Frost, Briggs & Chamberlain, and the contractor is Edward D. Ward.

The new mill will increase the plant from 15 to 50 looms, and will give work to 75 or 100 more hands, making 300 employees in all, 200 people, mostly from Worcester, now working at the mills. Work is nearly finished on the south wing of the new structure, and workmen are busy installing new looms. The looms are made by Hutchinson, Hollingworth & Co., limited, of Dobcross, England, who turn out the improved Crossley loom now used in many of the big carpet mills of this country for making the better varieties of carpets.

The Ettrick Mills Corporation has as local manager Henry F. Granger. The president is Herman A. Metz of Brooklyn. The stock in the mills is controlled by prominent business men in New York.

George H. Cutting & Co. have been awarded the contract for building a new power house for the Annette Manufacturing Co. in East Jaffrey, N. H. The contract also calls for the

repairing of a mill wall, which was blown down by the explosion of a boiler a short time ago.

The Norton Grinding Co. at Greendale has outgrown its present quarters, and has contracted for an additional building 152 by 80 feet, two stories in height. It will be a wooden structure, with a monitor roof. When the addition is completed, the entire building will be 296 feet in length. New machinery will be installed, and the force of employees, which numbers 110, will be increased.

The Norton Company manufactures cylindrical grinding machines, and since the first one was put on the market the business has rapidly increased. The Company was incorporated in March, 1900, with M. P. Higgins president, George I. Alden treasurer, Charles L. Allen general secretary, and Charles H. Norton mechanical engineer, all of whom hold the same offices now.

The Norton Emery Wheel Co. is to make an increase in its power plant. A brick addition will be put on the south and west sides of the plant, and a new 250 horse-power engine will be installed, as the present power facilities are not sufficient. A brick addition to the office building, three stories high, has just been completed, and will be used for office and shipping work.

May business at Worcester port of entry showed a substantial advance this year over 1904 in the matter of packages handled and value of imports. It was given out recently, at the office of the port in the Federal Building, there were handled during May 3055 packages, with an approximate value of $40,000. In May, 1904, there were handled between 1700 and 1800 packages, and value was $26,000.

The co-partnership existing for years of John P. Jones, Enoch Earle, Charles E. Hildreth and W. A. Blaisdell, under the firm name of P. Blaisdell Co., has been dissolved, Messrs. Hildreth and Blaisdell having bought the interests of the other two partners, and acquiring in their own name the property occupied by the concern on Jackson Street, its business and good will. The new owners have formed a partnership, and will continue the present business, with no change in name.

Mr. Albert A. Barker, for thirty years prominent in Worcester as an architect, a member of Worcester Board of Trade, and prominent in Worcester County Mechanics Association, died at his home on Chatham Street June 9, after a short sickness from pneumonia. Mr. Barker was born in Mexico in 1853, coming to Worcester with his parents, who were from New Hampshire, when seven years of age. He received his education in the Worcester public schools. His early business career was passed in the office of Atty. Thomas H. Dodge, as a patent architect, and afterwards he entered business for himself.

Mr. Barker was a member of the Old Salem Square Congregational Church, under the pastorate of Rev. Dr. Charles M. Lamson, but later affiliated with the Church of the Unity, where he had served for some time on the parish committee. He was instrumental in securing the present pastor, Rev. Charles B. Elder. Mr. Barker was a member of the Worcester County Mechanics' Association for a number of years, serving as its president for three terms. He leaves besids his wife, a mother, Mrs. H. E. Barker; one sister, Miss Mary F. Barker of the Oxford Street school, and two sons, Everett N. and Robert S. Barker. The funeral was Monday, June 12.

Mrs. Edward C. Thayer, late of Keene, N. H., gave more than half a million dollars in public bequests, not forgetting Worcester. One bequest is $20,000 for the Worcester City Hospital, and another is $10,000 to the trustees of the Nurses' Home, given the city by her husband.

Mayor Walter H. Blodget has accepted an invitation to deliver the July 4 oration in his old home, Denmark, N. Y. Mayor Blodget owns 250 acres of land in that town, on which are situated the post office, town hall and a store.

The American Trade Index for 1905 has just been issued. This plain announcement marks the consummation of a year's painstaking labor, and it may be stated that there is no book published whose issue is awaited with like interest in as many different countries. The edition of 1904, which was so favorably and approvingly commented upon a year ago, contained 702 pages in its foreign edition. The domestic edition for 1905, with the indices in French, Spanish and German, as well as with other reading matter intended for foreign readers omitted, has 778 pages. The foreign edition of the Index for 1905 contains over 925 pages; 2,697 classes of products, manufactured by the members of the Association, were recorded in the Index for 1904. The Index for the year 1905 records successively 3,373 classes of Amer-

ican manufactured products, giving under each the list of the members of the association manufacturing them.

With a feeling of just pride the association may look upon the new volume now presented to the world. It is an eloquent salesman, both in foreign parts and at home. Some copies of the Index will carry the fame of the American manufacturer further than any American salesman has penetrated. The American Trade Index need not be ashamed of the part it has played, is playing and will play, in the extension of American commerce and the promotion of the American export trade.

Mr. George H. Vars, resident Worcester manager for the Equitable Life Insurance Co., has resigned his office to accept the general agency for central Massachusetts of the State Mutual Life Assurance Company of Worcester.

The following notes are from the Worcester Polytechnic Institute:

Mr. Charles E. Goodrich, a graduate of the mechanical engineering department of the Tech. class of 1893, has recently returned to Worcester to assume the duties of the position of chief draughtsman for the Worcester branch of the American Steel & Wire Co. Mr. Goodrich has for some years been the chief draughtsman with the Barr Pump Co. of Philadelphia.

The Washburn Shops, through their New York agents, have just sold a number of drill grinders to the New York Central Railroad Co. These machines are of the latest design for wet grinding, the only wet drill grinder to receive a prize at the St. Louis Exposition last year.

The Washburn Shops have received an order for one of the screw spike drivers from the Baltimore & Ohio Railroad. When this machine was first invented, about a year ago, difficulty was experienced by the railroads because no screw spikes were manufactured in this country, but this drawback has now been removed and the screw spikes are at the present time being manufactured in large quantities. Wherever the screw spike driver, manufactured at the Washburn Shops, has been used, it has been found extremely satisfactory, and it is expected that its use among the railroads of this country will increase rapidly in the future.

Mr. F. R. Davis, W. P. I., 1900, graduate student 1901, has recently resigned his position in charge of advertising and publications of the Fort Wayne Electric Works to accept a similar position with the General Electric Company at Schenectady, N. Y.

There are already more positions open for next year to members of the senior class and of the post-graduate department in electrical engineering than there were members of this class to fill such positions. The Westinghouse Company has signified its desire to have ten of the graduates take positions with them, and the General Electric Company desires to secure nearly as many. Positions are also open with the Bullock Electric Company, of Cincinnati; the Fort Wayne Company; and a number of others. The entire senior class of the Institute, and also the members of the post-graduate electrical engineering department, have recently had an opportunity of surveying for and laying out an hydraulic power plant which is to be installed in the near future at East Killingly, Conn., for the Interstate Company of Danielson. This work consisted of choosing a site for the power house, locating the pipe lines and headgate, determining the total fall of water available, and making a profile of the land along which the pipe line is to run.

The commencement address at the Worcester Polytechnic Institute was given this year by Professor Robert Fletcher, dean of the Thayer School of Civil Engineering at Dartmouth College. Professor Fletcher has for many years held a position of great distinction among the civil engineers of this country. He is a graduate of West Point, and has been at the head of the Thayer School of Civil Engineering ever since it was established more than thirty years ago. Civil engineers who have during that time received their training under him have almost without exception been more than ordinarily successful, and an unusually large percentage of them have risen to positions of distinction in that profession.

Mr. R. W. Charlton, a Tech. graduate from the course in civil engineering 1904, has recently received an appointment to the engineering corps of the Panama Canal. Mr. Charlton took the civil service examination for this position last February in Boston.

An order was received from St. Petersburg a short time ago by the Washburn Shops for seven drill grinders to be shipped immediately. This order was followed by another order from the same source for one of the 14″ sensitive drills manufactured here. By a curious coincidence an order was received almost at the same time for a drill grinder for immediate shipment to Japan.

THE WORCESTER MAGAZINE

Vol. VIII. AUGUST--1905 No. 8.

AUG 5 1905

Magazine and Municipal Comment.
Representative Worcester Residences.
Regulation of Freight Rates.
Worcester's Public Playgrounds.
Plaza for New Union Station.
"Worcester in the Spanish War."
Board of Trade Notes.

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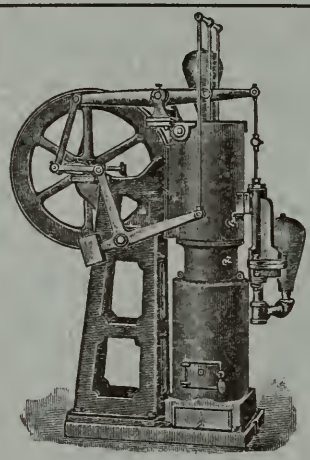

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WORCESTER, MASSACHUSETTS

WEST VIEW—RESIDENCE OF MR. A. P. CRISTY.

The Worcester Magazine.

VOL. VIII. AUGUST, 1905. NO. 8.

This magazine is published by the Worcester Board of Trade. Its reading pages are devoted solely to municipal development, good citizenship and the business welfare of Worcester. Space in these pages is not for sale.

MAGAZINE AND MUNICIPAL COMMENT.

Tax Rate for 1905

Worcester's tax rate for 1905 has been fixed by the assessors at $17 per $1000, which is a reduction of forty cents from the rate of 1904. A further reduction was not made on account of the marked advance of the State tax, which amounts to $161,434.34 as Worcester's share. This is $58,000 more than 1904, and the largest in the city's history. The tax rate is based upon an assessed valuation of $120,389,600, an increase of more than a million and a half over 1904. All things considered, the rate this year is reasonable, showing that the financial policy in City Hall has been conservative. The total amount required to be raised by taxation this year is $2,117,713.77, of which $1,820,586.40 is for city expenses, the county tax amounting to $135,693. Had not the State tax taken such a jump this year, the Worcester rate could easily have been fixed at $16.80. Of Worcester's total assessed valuation the bulk is, of course, in real estate, amounting to $95,661,200, as against a personal property valuation of $24,728,400. In comparison with the figures of former years, it is shown that the entire increase in total valuation has come in real estate rather than personal property. According to figures, the total number of polls assessed in Worcester at $2 per head is 36,855, which is the greatest number ever assessed, more than 1000 over last year's figures. The comparison of this year's figures with those of ten years ago is interesting. In 1895 the number of polls was 28,444, the total valuation $86,932,650, and the total tax to be raised $1,441,327.11, the tax rate being $15.40 per $1000. With all the talk about extravagance and unwise use of public funds Worcester's financial condition is far better than many other New England cities.

Worcester's Public Playgrounds

There is no other city in the country which has utilized its public parks for playground purposes to such an extent as Worcester. With its hundreds of acres of natural and cultivated parks, fully 200 acres are given up to amusements for children, with the best equipment for picnic parties. Crompton Park, Dodge Park and East Park are almost exclusively used as playgrounds, while Lake Park is the natural playground and picnic park of the entire system. The larger cities have established playgrounds for children, but they are distinctively playgrounds, hav-

ing no connection with the parks proper. Worcester has been in advance of other cities so far as parks and playgrounds are concerned. It was the first city to purchase land for park purposes exclusively. It was also one of the first cities to establish public playgrounds in its parks. Few people have any definite idea of the beauty, expanse and development of Lake Park. It comprises 110 acres, was given by two public-spirited citizens, and its development has been in progress nearly twenty years. It has an attractive tower, an ideal ball-field, perfect amphitheatre for picnic parties, and a beautiful shore drive. There are many acres under cultivation, but its real beauty is where nature has done its work. It is the ideal picnic spot of Worcester, the gem of the natural parks.

Representative Worcester Residence

Illustrative of the various styles of architecture embodied in the newest of Worcester's residences, the Magazine has made a few selections from those completed within the past year. The frontispiece of the present number shows the residence of Mr. A. P. Cristy, publisher of the Worcester Telegram. This is a type of the Southern colonial style, which has been developed in the North, and which was designed by Mr. George H. Clemence. It is distinctly a unique residence, located on Salisbury Street, at the base of Hancock Hill. It is the intention during the summer to show other styles of architecture which have been developed in the residential section. Within the past four or five years the Salisbury Street section has been developed for residential purposes, so that to-day it is the most prominent home section of the city.

Paradoxical New England

New England is easily the manufacturing centre of the United States. It has become this through an exceptionally good class of skilled mechanics, wise, careful and well-seasoned business intellect and judicious advertising. The latter feature is one of the strongest of the list. In all the world there is no market so alluring, so desirable, so easy to reach as New England. The history constitutes a series of paradoxes. It is a section devoid of raw material.

New England leads in cotton manufactures, yet does not grow a pound of cotton; she makes more shoes than all the rest of the country combined and still produces no hides; she leads in the wool industries, yet raises no sheep; she produces no coal or iron, yet most of her industries have largely to do with these commodities; all raw materials are brought in, and when she has made up her goods she has to go outside for her chief markets. There is no parallel to this in the United States. New England makes every year over $117,000,000 worth of boots and shoes, over $56,000,000 worth of foundry and machine shop materials, more than $22,000,000 worth of paper. Other leading items are: confectionery, $7,000,000; cordage and twine, $9,600,000; electrical apparatus, $10,000,000; jewelry, $10,000,000; lumber, $12,000,000; tannery products, $26,000,000; printing and publishing, $29,000,000; rubber and elastic goods, $14,000,000; slaughtering products, $32,000,000. New England has fifty per cent. of all the cotton spindles in the United States. She leads all other states in the woolen industry. She is supreme in the manufacturing of shoes. The making of jewelry is far in advance of any other section of the country, and the product is distributed throughout the world. The greatness of New England proceeds largely from the little State of Massachusetts, whose area is only 8,040 square miles. Within this limited area there are 2,805,346 people. This is greater than the combined population of the three Pacific coast states of California, Oregon and Washington, which contain only 2,416,692 people, and still have an area nearly forty times greater than Massachusetts. The last census showed that Massachusetts had more than 32,000 manufacturing establishments, representing an invested capital of $840,000,000, and employing more than a half million wage earners.

The State yearly manufactures textile goods to the value of $214,000,000, exceeding Pennsylvania, its closest competitor, by $56,000,000. Massachusetts

alone contains more than one-half the population of New England and yet it occupies a little less than one-eighth of the total area.

In all New England there are some 4,000 communities, made up of cities, towns and villages. In a great majority of cases these communities lie close together. Density of population has no equal anywhere else in the United States. Even in all the world there is no community where so many intelligent people are grouped together in so many individual localities. Each locality is supplied by separate and distinct stores, and it is this feature that makes New England so sought after by the distributers of goods, because density of population makes the distribution of goods not only easy but inexpensive. A traveling salesman in New England can cover more territory in a given time and reach a larger number of places than is possible anywhere else in the United States. Within a radius of 100 miles of Boston there are over 900 cities and towns on steam railways alone. Every manufacturer knows that a very big item of cost is that which comes from selling goods after they are made. In New England the placing of goods on the market is done at a remarkably small cost, simply because distances are remarkably short.

The people of New England, like the people everywhere else, have their own distinctive peculiarities. They are clannish and provincial, in the better sense of the word, and are not easily swayed by frivolous things. Their character is substantial and has been inbred for generations. Any advertiser who goes to New England with goods that will not bear inspection of the hall mark will find an unresponsive public. The same thing is true of any advertiser who goes there and attempts to influence business through frivolity rather than substantial arguments. There is, perhaps, no community anywhere which exercises the scrupulous discernment and discrimination of the New England people as a whole body. Intelligence is the most marked characteristic of all, and this characteristic pervades the upper classes, those lower down and those in between. It is really astonishing to a visitor in New England to find how intelligently and how thoroughly all general topics are discussed by all the people. One of the shrewdest advertisers in the United States says the reason the New England market is so much sought by the experienced advertiser is that the buying is done almost exclusively by the mistress of the house, and this mistress has inherited for generations the characteristics of her forefathers, which is to buy good things even though she does not buy so often. The same advertiser also says that the servant in New England is entirely eliminated when it comes to specifying the brands of goods bought. In other large centres of population, and particularly in New York, it is the servant who does most of the buying, and she is influenced more by the tip of the butcher and baker than she is by advertising or the brand of goods. An advertiser in New England should address all his arguments to the head of the house, and bear further in mind that this head is an intelligent one.

Washington Square a Plaza

The Magazine this month presents a plan showing how Washington Square can be made into an attractive plaza in connection with the new Union Station. The suggestions are furnished by Mr. Pierce Anderson, who is an assistant of D. H. Burnham & Co., architects, Chicago, who are making the plans for the new terminal station in Washington, and the plaza in connection with the same. This is to be the largest terminal in the world, and the plaza is to be constructed at an estimated cost of $1,500,000. From these suggestions Mr. T. J. Sawyer has drawn the plan, which is printed this month. Such an arrangement contemplates taking a part of the land on the north side of Washington Square now covered by a row of low wooden buildings; also land belonging to the railroad now fronting the present Union Station. This is a feature of the Union Station proposition that the city should give consideration. It is not expensive, and means a great deal to the attractiveness of that section of the city. With the widening of Shrewsbury Street, which is provided for, and a new Union Station,

Washington Square arranged as a plaza would become an ideal gateway of the city.

D. H. Burnham & Co. have furnished the Board of Trade a set of plans for the new Washington Terminal and plaza, including the plan of plaza and building and a perspective of plaza and building, together with detailed drawings. These can be seen in the rooms of the Board of Trade.

The Trolley in Massachusetts

The Board of Trade has received from the United States Census Bureau a comprehensive review of the trolley business in the United States, elaborately illustrated, and dealing with every phase of electric traction, from fuel supply and power houses to the latest improvements in the way of trolley sleeping cars and suburban express service. A fine series of illustrations makes the work attractive, aside from its purely statistical merits. Among the illustrations is shown a view of Pinehurst Park, which is given as typical of amusement parks in New England.

In the way of trolley development, Massachusetts, particularly that portion of Massachusetts east of a line drawn through Worcester and Fitchburg, can show about the most complete system of lines in the United States. There is scarcely a town of any size in the eastern portion of the Bay State which cannot be reached by trolley from Worcester, which is in itself a trolley center of the first importance. The rugged nature of the country, about Worcester and eastward, makes such lines as center about Indianapolis somewhat too expensive to operate in Massachusetts, except between large centers of population, such as Boston and Worcester. But the local lines, which stretch almost to New Hampshire on the north, and will soon touch the Sound on the south, and which reach out to every important center of population in Worcester County, are quite sufficient to meet the needs of the population which they serve. The through express lines are coming. They will occupy a place by themselves and serve a population whose needs are quite distinct from those of the suburbanite.

As the matter now stands, it is possible to go by trolley all the way from Maine to New York City, where ferry must be taken to the New Jersey or Staten Island shore. Once to the other side there is unbroken trolley connection right into the heart of Pennsylvania and far on the way to Washington itself. If the schemes of the Western Massachusetts Street Railway Company are carried out as projected, there will soon be a line of trolleys from Boston through Worcester and Springfield, over the Berkshires to Albany, up the Mohawk Valley to Utica, Rome, Oneida, and Syracuse; then across western New York through Rochester and Lockport to Buffalo, via Tonawanda, passing within a few miles of Niagara Falls, for which connection can be made at Tonawanda.

In the way of improvements in equipment, the lines about Indianapolis and Cleveland show the greatest advances, probably because of the long runs about those centers. The trolley sleeping car is already a fact, a company much like the Pullman Company having undertaken to build and care for the cars, leasing them for use on the trolley lines. The express baggage car is already a feature of many roads in Pennsylvania and New York, to say nothing of the long lines farther west. The right of way of through trolley lines is like that of the Boston & Worcester, in most instances, private and double-tracked, to allow of high speed. The trolley is becoming every day more like the railroad in equipment and management, as well as in the class of traffic handled.

Phœnix of the South

There is something magnificent—a splendid illustration of the American spirit of optimism—in the action of the people of Baltimore a few days ago in voting for the expenditure of $13,000,000 for civic improvements. With the appropriations made after the great fire of fifteen months ago, which might well have daunted any stout heart, the city has planned for an expenditure of $22,350,000 within the next few years. The majorities in favor of the three projects for which the $13,000,000 is to be expended were decisive, and show the de-

termination of the people of old Baltimore to create a new Baltimore, which shall be among the foremost of American cities in healthfulness, attractiveness and greatness.

For a new sewer system the city will spend $10,000,000, and for opening up new streets and developing what is known as the "Annex," a part of the city which was added a few years ago, $2,000,000 will be expended. The remaining million dollars is to be used for beginning the development of a splendid park system which was designed by Frederick Law Olmstead some years ago. Of the $9,350,000 which the city appropriated after the great fire, $6,000,000 was for docks and wharves, and the remainder for improvements in the fire-swept district. With the ordinary appropriations for street paving, widening and other improvements, the total to be paid for the new Baltimore within a few years will be not less than $25,000,000. If wisely expended, Baltimore will fulfill its promise, made by the newspapers the day after the fire, of rising from its disaster greater than ever before.

On the "Merger" Bill

Before the Legislature adjourned it referred, at the suggestion of Representative A. M. Taft of Worcester, transportation matters to a special recess committee, composed of three members of the Senate and eleven of the House. That committee, if it does its work well, and it is a strong committee, ought to make a report to the next Legislature on which some adequate laws for the regulation of steam roads and electric railways can be based. The necessity for a thorough overhauling of the State's transportation laws was so apparent that there was little difficulty in getting such a committee appointed.

One of the important matters to come before the special committee is the "merger" bill, permitting steam railroads to buy street railway properties. Representative Luce of Somerville is not on the committee. While he might not have been in accord with the majority, and while he opposes the ground taken by the Railroad Commissioners, it is well worth while to have all interests represented, and there can be little doubt of his good faith. Both the steam railroad and street railway interests are ably represented at present, and as the Legislature has already put itself on record as favoring "mergers," disagreeing only on terms, the committee has to consider only details of the situation.

Manufacturers' Fair in the South

An interesting sidelight upon industrial development in the South is the plan of ladies of Mobile, Ala., to hold in November an "all made in the United States fair." At the fair manufactured products will predominate, and the purpose of the ladies interested is to write to all the manufacturers in the United States for a donation of some article manufactured by each, the practical terms from the manufacturers' standpoint being given by the suggestion that Mobile, with its steamboat and sailing connections with South American and Cuban ports, is a good place to advertise one's wares. It is expected the originality of the plan will commend it to American manufacturers.

Warnings to Exporters.

The American exporter gets frequent warnings for his failure to study the foreign market, and for his neglect properly to pack what goods he sends, and he needs more of them. It is from a keen realization of the shortcomings of the exporter that Secretary Metcalf, in the "Daily Consular Reports" now published by his department, is now adding timely discussions showing why foreign merchants are monopolizing the trade in South American countries right under our nose, why we take the leavings in other lands. In the first report from a South American agent, it appears that German and English traders send their advance representatives to Brazil and other Latin-American republics to find out what the tastes of the people are, while the American merchant's first move is to dump his goods, then to select an agent afterwards.

As a consequence, Germany and Eng-

land are selling cheap goods, which the South Americans want and have just enough money to pay for, and the American shipments of high-priced articles are either kept on the shelves unsold or returned. A little foresight in having found out what quality of goods is desired would have boomed American trade.

Another instance of neglect in our export trade comes to light in China. Hundreds of Chinese have been made sick by using cheap American flour, which had contained some deleterious substance before it left the United States. Naturally, exporters cannot blame Secretary Metcalf for not advertising new markets for American trade, or foreign people for not buying American goods when the exporter's own carelessness is so patent. Secretary Metcalf has the right idea in first reforming the exporter, and if he keeps at it early and late our trade with foreign countries should be materially increased.

Answer of Massachusetts

The reply of the Massachusetts State Board of Trade, through a special committee, to a communication received a couple of months ago from the chief of the Bureau of Manufacturers at Washington, requesting the views of that organization on the best means of promoting manufacturing interests and extending markets, is an important document because it may be accepted as expressing the prevailing opinion of the leading business men of the State. In this consensus of well-considered conclusions, there are naturally some academic features, but practical suggestions predominate. To promote manufactures we should employ the latest and best machinery; utilize to the fullest extent our unused water-power, either directly or for the generation of electricity, make the hours of labor as short as is consistent with surrounding conditions, and pay the best possible wages for skilled labor.

Imposes New Duty

The State Board of Education has already given wide publicity to the new law of 1905, which raises the age of compulsory school attendance from fourteen to sixteen for children "who cannot read at sight, and write legibly simple sentences in the English language." This imposes a new but by no means unnecessary duty upon school committees and superintendents. The secretary of the board asks that the phrases upon which this extension of the age limit is conditioned "be interpreted liberally in the interests of education of the child, and not narrowly in the interests of his labor." In other words, it is the purpose of the new law to make our educational system show results. The demand is not unreasonable. A child is certainly not entitled to be classed outside the illiterates unless he can meet these simple and fundamental tests. The doors of knowledge cannot be opened short of that amount of equipment. With it there is hardly any limit to the advance that is possible, as the lives of some of our great men have shown. Without it the limitation is close at hand, and almost insuperable. "If the law is executed rigorously in its spirit, it will prove to be a noteworthy addition to the school legislation of the State," says the secretary. If the law is thus administered, it will reduce still lower the percentage of illiteracy in the State, which is already a small one.

Regulation of Freight Rates

Regulation of freight rates was one of the most important matters before Congress prior to the summer adjournment. During the recess hearings have been going on, and railroad men and shippers have given considerable of their time to a discussion of the merits of this important question. A commission from the New York Chamber of Commerce has for several years been investigating the rate problem. In the Magazine the report of that commission is given. The chart accompanying the article shows the variations in prices, wages and freight rates from 1890 to 1903. It is an interesting study, and shows the wages have led the prices while freight rates are well down on the chart.

REPRESENTATIVE WORCESTER RESIDENCES —WEST VIEW.

TWO distinct types of colonial architecture are included in the newest homes of Worcester's prominent business men. West View, the home of Mr. Austin P. Cristy, publisher of the Worcester Telegram, represents the southern colonial type, which is derived from the best period of Georgian architecture; the other, Elmarion, the home of Mr. Harry W. Goddard, president of the Spencer Wire Company, and president of the Worcester Board of Trade, represents the more severe type of the New England colonial design. West View, situated just within the two-mile circle from City Hall, at the base of Hancock Hill, commands a view of the city, the equal of which is possessed by no other Worcester residence. Elmarion, situated in the wooded shade of a spacious lot at the corner of Salisbury Street and Park Avenue, gives the owner a complete sweep north and south of the fashionable boulevard, and overlooks Institute Park, the gem of Worcester's cultivated park system. This section of Worcester is the only locality which can be excepted from a recent statement of Rev. Dr. Willard Scott that the city has no drives which will give the stranger a favorable impression of its beauty as a residential city.

West View is a Salisbury Street residence. Although situated upon a broad estate, covering many acres, its definite location is at the base of Hancock Hill, one of the historic spots of Worcester, and, with a single exception, the highest elevation within the city proper. It rises to a height of 780 feet, which is sixty feet above Bancroft Hill, and is equaled in height only by Mt. Ararat in Greendale. The site of this mansion is about 500 feet back from Salisbury Street, reached by wide macadam driveways with rough stone piers at either entrance. The grounds sloping to the street are well landscaped, giving the building a commanding appearance. While this mansion is unlike any in Worcester in architecture, it is of that type which made the South famous for its mansions, and of that type which has been little copied in the North. Developed and localized on southern estates, it represents the best work of the old country.

The house is of red brick with Indiana limestone trimmings. The design of the front is characterized by the quiet dignity and restfulness in treatment of the masses and the marked enrichment of the central motive, embracing the stately portico, which rises from a broad terrace extending across the front. The two flanking wings on either side emphasize by their simplicity the strong central feature.

Opening from the portico is the main hall, 28 x 40 feet, with beamed ceiling, out of which is a nook with fireplace and seats. The main stairway leads from this hall with a generous landing, where are seats from which is obtained a fine view of the interior. The reception hall also has an alcove with seats, from which one of the finest views to the south is obtained. This room is finished in white paint, the walls being decorated in colonial yellow in artistic designs.

Opening out of the reception hall to the west is the dining-room, 22 x 25 feet, with an imposing fireplace at one end. The room is finished in Mexican mahogany, walls and ceiling, and between the top of the mahogany dado and ceiling is a frieze of hand-tooled leather. Opening out of the reception hall to the east are the reception-room and parlor adjoining, thrown into one by wide arched openings, the total areas being 20 x 40 feet. This is finished with paneled woodwork, the halls being dadoed. At the extreme easterly end of the house is a library 22 x 25 feet. This is finished with selected quartered white oak, with

the ceiling heavily beamed with the same material. Bookcases line the wall, and the room is fitted with a large, imposing fireplace. Out of the library is a veranda 13 x 26 feet. This is on the northeast side of the house away from the sun, and rather secluded, and is entered by a French window from the library. One feature of this mansion is the interior view, which, taken on the longest axis of the building from one end of the dining-room to the opposite end of the library, gives an uninterrupted view of 110 feet, which is more than half the length of City Hall.

The second story is devoted to sleeping-rooms, with tiled bath-rooms and dressing-rooms connecting. On the third floor is the billiard room, 20 x 38 feet, finished in Flemish oak, the fittings being handsome black iron trimmings in chandeliers, fireplace, furniture, etc. The balance of this floor is given up to sleeping-rooms. The wing of the building is 43 feet long, and is devoted to the service department, being entirely outside the main building. In this are the kitchen, china closets, butler's pantry, and servants' dining-room, with sleeping and bath-rooms on the upper floors. The carriage entrance is by a broad driveway at the rear of the building leading to a terrace, from which the main hall is reached.

The building is lighted throughout with electricity, and is heated by indirect steam on the first floor, and direct steam on the upper floors. The boilers are located in the stable, more than 300 feet from the main building. In keeping with the colonial design, the furniture throughout is mahogany, the decorations and furniture being especially designed for the residence by J. I. Wingate & Son, Boston. The floors are of hard wood, covered with Oriental rugs.

This residence was designed by Mr. Geo. H. Clemence, architect, who visited Southern cities, and gathered ideas which are embodied in this residence. Next month a detailed description of Elmarion, the residence of Mr. H. W. Goddard, illustrative of the type of New England colonial residences, will be given. It is the purpose to present other styles of architecture, of which there are attractive representations in the suburban section of the city.

Cities do not consist of mortar, brick and stone, but of the character of their citizenship. The government never neglects the people unless the people first neglect the government. No government, city, state or national, was ever better than the people made it, or worse than they suffered it to become. Good citizens may make good laws, but no law can make good citizens. The patriotism of peace is just as necessary as the patriotism of war. Plenty of men will die for their country, but the man who will live for his city every day is the man good government needs. Good government does not exist by accident.—Joseph W. Folk.

REGULATION OF FREIGHT RATES.

ONE of the most important matters of legislation now before Congress is the regulation of freight rates. It is for this purpose President Roosevelt considered calling a special session of Congress. It is relative to this important legislation that a special committee of Congress has been taking evidence during the recess, with a view to recommending Congressional legislation in the matter of freight rate adjustment. Upon the adjournment of Congress the House had passed the Esch-Townsend bill, but the Senate referred the whole matter to a joint committee.

A great majority of the business organizations in the country, including the Worcester Board of Trade, have urged Congress to regulate freight legislation, and to-day it is the most important subject, from a business standpoint, before the country. A report of the Interstate Commerce Commission, which has been investigating the question of freight differentials, has been made.

Although it is apparent, from the evidence submitted to the committee, that uniform rates to all ports on the Atlantic seaboard would not only be unjust but ruinous, from a business viewpoint, it has also been demonstrated that there has been undue discrimination against the port of Boston, with the result that the trade of that port is being gradually whittled away and distributed to other ports along the Atlantic seaboard. The findings of the committee are definite and clear. The prosperity of New England depends on some effective re-adjustment of railroad freight rates.

A commission from the New York Chamber of Commerce, representing the entire State, has for several years been investigating the rate problem. It represents the mercantile, manufacturing, transportation and commercial interests of the State generally; these are all closely interwoven with the business interests of the whole country, subject to the same influences and fostered or depressed alike by favorable or adverse forces.

The cost of transportation is a most important factor in determining the measure of profit and the degree of business prosperity. Uniform rates, granted alike to all interests under similar circumstances, are indispensable for the protection and preservation of the rights of individuals and localities. It is a well-defined and well-recognized duty of common carriers to treat the public alike, except in so far as the wholesale and retail principle, or other well-recognized causes, may justify differentiation.

It is opposed to unjust discrimination in favor of individuals, corporations or localities. It is opposed to secret rates, rebates or drawbacks, as a means of discrimination. It believes the freight of a shipper, loaded upon the cars of the railroad on its own tracks, is entitled to as favorable a rate as though loaded upon a siding extending into the factory or warehouses of another shipper. It seems to be generally conceded that in many localities the ownership of terminal trackage or cars specially fitted for the transportation of certain classes of goods, is made the basis of discriminating rates to the owners of such trackage or cars, to the great detriment of their competitors in business.

It believes the railroads should in general own or control the cars used in transportation, and in case of the use of specially constructed cars not owned by the railroad granting the rate, a uniform compensation should be fixed of which any and all shippers could take advantage.

In earlier years it worked hard for the creation of a National Railroad Commission, realizing that the collation and publication of statistics of all the roads of the country would educate the coun-

try as to existing and varying conditions, and form a basis for intelligent remedial action where necessary. It felt confident, also, that such a commission, with power to investigate and publish the result of their investigation, would be in a position to redress wrongs and adjust inequalities; the existence of such power would be a strong deterrent influence against wrong practices, and the recommendations of the commission would be almost certain to be complied with. This belief has been largely justified by the result, for the record shows that 90 per cent. of the complaints presented to the commission have been settled by correspondence and negotiations without formal proceedings; that of the remaining ten per cent., in eight per cent. of the cases the railroads have complied with the orders of the commission, and that there has been litigation only with reference to the remaining two per cent. In those cases the ultimate decisions sustained the contention of the railroads to such an extent as to justify the litigation and establish the general purposes of the railroads to comply with the recommendations of the commission.

The Interstate Commerce Commission has, in its annual reports to Congress, and through other instrumentalities for reaching the public, asked that power be granted it to fix and determine rates of transportation. This subject received great prominence in the annual message of the President. Several bills are now pending in both branches of Congress, the crux of which is the granting of rate-making powers to the Interstate Commerce Commission as now constituted, or some succeeding body.

Since 1880, when this chamber was so actively interested in doing away with special rates and discriminations by the railroads, the cost of transportation has tended downward in a marked degree. The slight increase since 1899, amounting to about five per cent., has not been in proportion to the increased cost of labor and materials which railroads are compelled to use in the conduct of their affairs. This is evidenced by statistics which show that operating expenses have increased in greater proportion than gross earnings.

The prevailing charges for railroad traffic in the United States are about one-third those which obtain in England and France, and about one-half those obtaining in Germany. It would seem, therefore, that the freight charges of our railroads are not unreasonably high.

Discriminations and inequalities in rate of transportation do exist, are a legitimate grievance on the part of the public, and their correction is a proper exercise of governmental authority.

The city of New York believes itself discriminated against by the differentials granted to the cities of Philadelphia and Baltimore, while Boston, involving a longer haul, is given the same rate as New York. An issue involving a re-adjustment and discontinuance of such discrimination is now pending before the Interstate Commerce Commission, in which the several cities interested are parties, and the several railroads terminating in these cities are also parties.

In the State of New York discriminations as between different shippers have largely been corrected and fairly done away with by present laws enforced by our State Railroad Commission. Chicago is the centre of the railroad traffic of the country, and there is much evidence that it is also the centre of railroad discrimination as well. It is important to note this in view of the fact that Illinois was one of the first states to create a railroad commission and give to the commission power over rates.

Inequalities and discriminations do exist. All discriminations are not made for the purpose of increasing the tonnage of the road. Railway officials, having power over rates, have in the past profited by such concessions, as well as the shipper to whom they were granted. A dishonest traffic manager could as easily violate a rate made by the commission as one made by his own management.

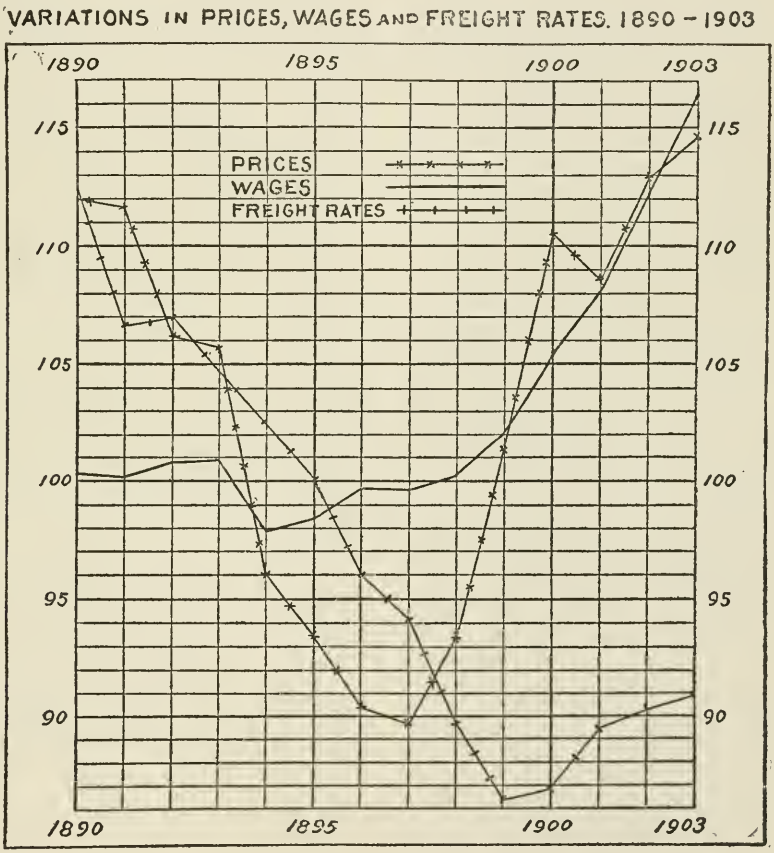
The report of the Interstate Commerce Commission, 1904, page 64, states that there were, on January 30th, 1904, 2,358,960 tariffs on file with the commis-

sion, the average number of tariffs filed annually being over 130,000. It is proposed to devolve upon the Interstate Commerce Commission the duty of inquiring into the justice and fairness of the rates contained in these tariffs, and whenever they find a rate to be unjust or unfair, to fix and determine, subject to review, what the same shall be in the future. The courts have decided that a rate, to be legal, must be fair to the investors who own the road as well as the shippers—a rate that amounted to confiscation would not be legal and would not stand.

With great respect for the Interstate Commerce Commission, every-day experience in business affairs cannot be ignored, and they teach us that granting such power to the Interstate Commerce Commission, and imposing upon them such duty, is likely to lead to disappointment. Some idea of the magnitude of this undertaking may be gained from the fact that the earnings of the railroads last year were in excess of $1,900,000,000, and their capitalization in excess of $14,000,000,000, and the internal commerce of the country, largely transported by rail, has been estimated at $22,000,000,000.

Is the present method of making

The divergence between the movement of freight rates and the course of prices and wages is emphasized in this chart.



Based on official statistics of the United States Bureau of Labor and of the Interstate Commerce Commission. In each case the average of the period, 1890–1899, is taken as the standard.

freight rates generically wrong? The railroads should be required, by proper statutes and proper penalties, to observe the well-defined duties that devolve upon common carriers, but is it not wiser to leave with them the responsibility of making rates?

The commission, with its powers of inquisition, can discover the wrong, develop the evidence to prove the same, commence suit in the courts to effect a remedy—but it is suggested that the trial be had in the same courts and with the same procedure in which the government, corporations and individuals alike now seek redress. The constitution of these courts and methods of procedure are the growth of generations, and are believed, in this enlightened age, to be the best method of enforcing rights and redressing wrongs.

The creation of additional judges, or the assignment of existing judges to a specially constituted court, in order to facilitate the hearing and determination of cases arising under the Interstate Commerce Law, would be wise and commendable, but it seems, according to this commission, that railroads, like individuals, have the right to have questions involving their management and welfare, including making rates, passed upon by competent judges, after a hearing conducted according to the usual rules of judicial procedure, before the same be adjudged wrong. The railways, through the ownership of their securities, represent a very large number of our citizens. The wealth of the country is very rapidly increasing. This is true of all localities and of all classes, and the securities representing the capitalization of our railroad systems are owned in varying degrees by our citizens throughout the length and breadth of the land. Large and small investors own the same directly and the poorer people own them indirectly, through their deposits in the savings banks and their interest in the life insurance companies. Investors in these securities are entitled to consideration at the hands of the government, as well as those who make use of transportation facilities. The army of employees who derive their living from these corporations also have rights involved in any serious change in railroad transportation.

Such wrongs as exist should be righted. The President has the endorsement of the country in his efforts to right these wrongs.

In advocating an interstate commerce commission this committee says: "It is a proposition to directly determine the earning capacity of certain properties, and, therefore, to fix their value. It grants great power over such earning capacity without any responsibility on the part of the men who exercise that power, to protect the values or the income of the same, other than the responsibility to properly discharge an official trust. It is a fundamental departure in governmental administration, the success of which is at least problematical, and fraught, we fear, with grave danger. It would, undoubtedly, be well administered under the present administration, it might be under many administrations, but it is easy to conceive an administration of such a power that would be prejudicial to the public interest.

"Let the statutes clearly define the duties of railroads as common carriers, with proper penalties for all infractions of the law; let the commission exercise its power of inquisition to the fullest extent; bring all questions which the railroads fail to adjust before the courts, and then let the courts redress the wrongs and enforce the rights thus brought before them."

In connection with this proposition a chart shows the variations in prices, wages and freight rates. While this chart is designed to show the decrease of freight rates, it also substantiates the figures of President Carroll D. Wright of Clark College, formerly United States Commissioner of Labor, of which he proves that wages had advanced faster than prices.

WORCESTER'S PUBLIC PLAYGROUNDS.

WORCESTER is one of the few cities in the United States which makes playgrounds a feature of its public park system. In the larger American cities the playgrounds are in the more congested centers, and are exclusively given up to amusements for the children.

Franklin Park in Boston is an illustration of this. Within the past five years the playground feature of the Worcester park system has developed in a remarkable degree—so much so that parks commissioners of other cities have copied the Worcester plan in providing summer amusements for their children. While the public park system has been written in detail in the Worcester Magazine, under the heading "What the Citizen Has Done for the Parks," no attempt has been made to describe this important and unique feature of the system. The articles on the Worcester parks previously published were devoted to the generosity and public-spiritedness of Hon. Stephen Salisbury and Edward Winslow Lincoln in the first, and Hon. Edw. L. Davis, Horace H. Bigelow and Obadiah B. Hadwen in the second.

The most distinctive playground is Crompton Park, with its fifteen acres, devoted almost exclusively to amusements for children, while the most distinctive picnic ground is Lake Park, one of the most attractive natural parks in the country, combining lake, forest and grove in the 110 acres of which it is comprised.

Crompton Park was the first to be utilized as a public playground. It was the idea of the commissioners to experiment in this section of the city. The result was so satisfactory that the plan there introduced more than four years ago was extended throughout the parks of the east side. There are upon its fifteen acres three well laid out diamonds for baseball. These are used by teams from the industrial plants in the south and east sections of the city; also by minor league teams. There are other diamonds, making it possible for six games of baseball to be in progress at the same time.

The next attraction in importance is the wading-pool, which covers an area of half an acre. The excavation gives a depth of two feet at one end and between four and five feet at the other, with dressing shelters at each end. It was designed for boys and girls, and is restricted to children twelve years old and under. Here it is that many children have received their first instructions in swimming. Mothers in that section are naturally pleased with this plan, for the element of safety largely enters into it, the children learning under the eye of their parents. On a warm day it is not unusual to see upwards of 150 children bathing. The pool is supplied from the overflow of the drinking-fountain.

The gymnasium feature of this playground more strongly appeals to the boys. It is a simple equipment, comprising horizontal bars, swinging rings, tilting ladders, and ladder and slide. There are three sets of swings, all of heavy construction. The tops are fitted with pulley bearings of babbitt metal. The giant stride, or merry-go-round, consists of an upright pole about twenty feet high, suggesting a maypole. At the top are two revolving discs, fitted with ball bearings. There is a large hoop with ropes attached which come down within five feet of the ground. They are fitted with handles, so that the children can regulate the speed. In addition to these amusements are the ordinary teeters and sand gardens, so that entertainment is furnished children of all ages. To further attract the boys the commissioners laid out and constructed a cinder track, anticipating the development of track athletics, but it never was used to any appreciable extent, and this feature has since been eliminated from the development of the playgrounds.

The thoughtfulness of the commis-

sioners did not exclude the mothers of the children whose amusement they planned. Throughout the park there have been distributed shade trees grouped at either end, while encircling these fifteen acres is a double row of maples forming a mall. Beneath these trees are more than 150 seats, furnishing a resting-place for the mothers and infants, shade being ample throughout the park. At an elevation of fifty feet above the level of the park proper are two shelters, giving vantage ground for surveying the entire park. It is this elevation that furnishes a place for coasting, and the wading-pool of the summer is the skating-rink of the winter.

So much had been said of the rough element existing in this section of the city, and that a playground could not be maintained, the commissioners four years ago made an experiment with shrubbery and flower-beds—more than 1000 plants and shrubs being set out. There never has been a complaint of the mutilation or destruction of one of them. It seems to the commissioners that they have demonstrated the fact that the more you do for the people, and the more you trust them, the better will they take care of things.

The general public has more opportunity to see the playground feature of the park system in East Park, which has its frontage on Shrewsbury Street. The gymnasium equipment is practically a reproduction of that at Crompton Park. Its baseball fields are limited to two, while the wading-pool is twice as large as that in Crompton Park. There are a large number of shade trees covering the side of Chandler Hill. This section of the park is exceptionally attractive by reason of its elevation. At the summit is a ball-field, merry-go-round, swings and teeters for the children of the Belmont Street section of the city. East Park proper, from the playground standpoint, suffers in comparison with Crompton Park. To plan for the children an attempt was made some few years to secure the street railway property which adjoins the park on the east, but the City Council declined to grant the request of the commissioners.

The extreme north end of the city has not been neglected, although no elaborate playground is maintained. Dodge Park, near Odd Fellows' Home, carries with it a small gymnasium equipment, and one baseball diamond. This park is used more for a picnic ground. There is a grove covering about two acres, in which is the Arthur spring famous in early history. It is enclosed by a canopy twelve feet high of boulder construction. In the ten acres comprising Dodge Park there is no more attractive place than this spring.

There is no spot in the country so complete for picnic parties as Lake Park. It is the mecca of people who want a day's outing, and contains more distinctive beauty spots than any natural park in New England. Bordering on Lake Quinsigamond, the most beautiful water park in the country, it has a gradual rise for more than half a mile to Davis Tower, from which a picturesque view of the surrounding country is obtainable. The 110 acres comprising this natural beauty spot have been developed within the past eighteen years—almost entirely under the direction of James Draper of the Parks Commission. The land was given the city by Hon. Edw. L. Davis and Horace H. Bigelow, each giving fifty-five acres. In addition to this gift, ex-Mayor Davis expended about $8000 on the stone tower which bears his name. He also gave $5000 to begin the development of the park. Various amounts have since been given by the city, which have been judiciously expended in beautifying these grounds, with the result that Worcester has a park of which she may well be proud. Of the 110 acres more than seventy-five were a forest, which has been cleared in part as opportunity permitted. There are about two and a half miles in drives, and nearly two miles in walks, all leading to the more important features of the park, which are Boulder Drive, Fernland, Overlook and the Tower.

The principal attractions are the ball-fields and picnic grounds. The latter

are so conveniently laid out that many individual parties can be cared for. There are forty-two double-length tables, each large enough to seat sixteen people, and for family parties driving to the grounds hitching-posts have been provided near each table. There are several springs in the park, which provide good and cool water, wells having been dug and water pumped up in the grounds. So popular is the park that on a pleasant Sunday not a table is unoccupied. The grounds are reached by the Lake View and Hamilton Street lines of the Consolidated Street Railway. Davis Tower is about ten minutes' walk from the end of the Hamilton Street line, and the north end of the park is about seven minutes' walk from the Coburn Avenue station of the Lake View line.

There are three baseball diamonds, all well laid out with backstops and seats, and they are in demand nearly every week day. The control of both baseball and picnic grounds is in charge of James Draper, applications being made to him direct. Permits are issued to the caretaker, and the applicant specifying which diamond or which picnic ground is desired, thus avoiding any conflict. The ball-fields are known as the north, south, and southeast diamonds, while the picnic grounds are designated as north grove; central grove, north section; and central grove, south section. A permit for the use of any of the picnic grounds carries with it the use of one baseball diamond. There have been more than twenty-five requests this summer from church organizations, and more than seventy-five permits have been issued for use of the ball-fields.

In the picnic grounds are swings of the old-fashioned rope style, also the heavy swings that have already been described. There have been added this year twenty-five box swings. In the groves and other places are swings and teeters, where children may amuse themselves to their hearts' content. In addition there are two merry-go-rounds popular with the boys and girls. A new attraction is the toboggan-slide. It is an invention of Mr. Draper, and was started last year. Two long pieces of southern pine were polished smoothly, put opposite and placed near together. A platform was built for children to reach them. The boys throw one leg over each railing and thus go down the slide. Two new ones have been built this year in the north grove. They are about forty feet long and in the middle there is a break. By the time the children get to the end they slide off smoothly. They are reached from the same platform by stairs, which are several feet from the ground. In the central grove a slide has been built a trifle longer than the others, being fifty feet in length.

Another feature of the park is the deer preserve, which comprises an enclosure of six acres. There are at the present time seven deer, some from the Elm Park herd and others from Maine. To make the park accessible by water a landing has been constructed on the lake front, four minutes' walk from the central playground.

The newest acquisition to the city's playgrounds is Greenwood Park in Quinsigamond. It was acquired this year, and comprises eleven acres. Grading has been done for baseball grounds, and a gymnasium equipment installed similar to that in Crompton and East Parks. The wading-pool will not be completed before another year. Greenwood Park is designed to be one of the principal playgrounds of the system.

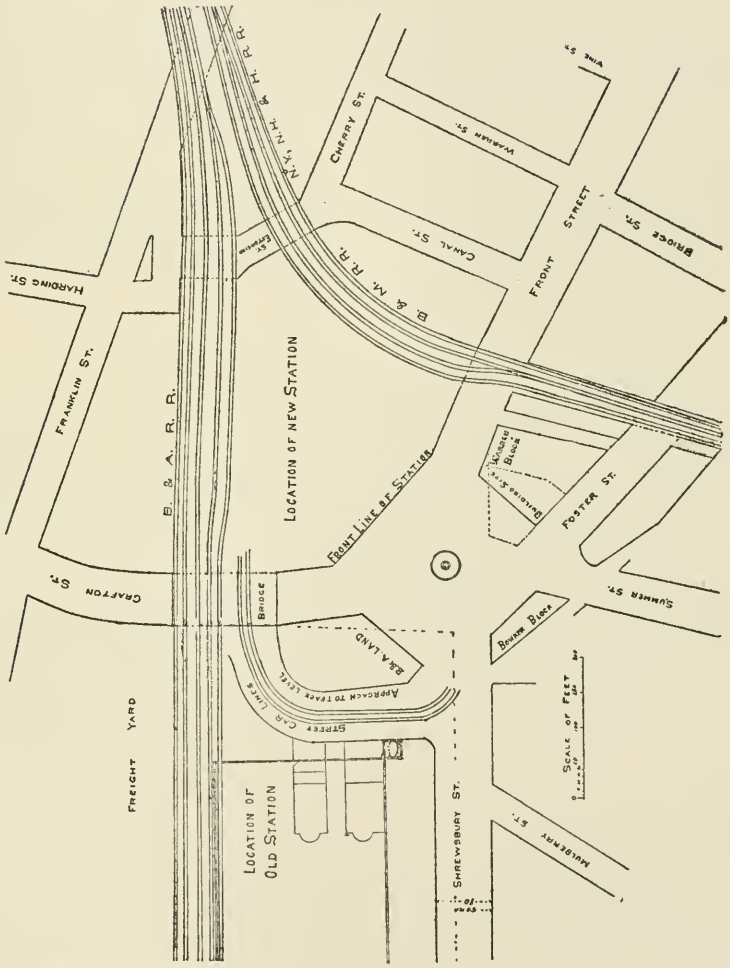
Of the 500 acres of Worcester parks, natural and cultivated, fully 200 acres are given up to playgrounds for the children. Worcester is not behind any other city in furnishing summer amusement for its boys and girls. The wading-pool and gymnasium features have attracted the commissioners of parks of other cities. Worcester was the first city in the United States to purchase a tract of land for park purposes, and it is also the first city to devote liberal sections of its park system to children playgrounds.

PLAZA FOR NEW UNION STATION.

THE location of the new Union Station at Washington Square has been decided upon. Neither the city nor the railroad companies have given the slightest consideration to any plan of beautifying its surroundings. American cities are giving considerable thought to making its squares, streets and boulevards equally as attractive as its public buildings. The new Union Station is to be erected in Washington Square for future generations. It is the purpose of the railroad companies to provide facilities in keeping with the remarkable growth of this city. This means a building of no mean proportions, of attractive design, and spacious facilities. It means a station with floor space half the area of that of the South Terminal Station in Boston. Whether the waiting-rooms and tracks are upon the same level, or there is to be a separation of grades, is a proposition which the city will determine later. It is not the station proper to which the Magazine calls attention at this time. It is the square upon which this building will front. It is the development of a plaza which now demands some consideration from the city. Washington Square is the terminus of Front, Foster, Summer, Shrewsbury and Grafton Streets. On present plans it is irregular, unattractive and anything but symmetrical. In building its Union Station, Providence gave as much attention to the plaza as it did to the plans of the building. It was a question equally important.

Mr. Pierce Anderson of D. H. Burnham & Co., architects, of Chicago, has had much to do with the designing of the new Washington Terminal and its surroundings. In that city, in order to make the approach to the station artistic, more than $1,500,000 is to be utilized in a plaza. To make a plaza of Washington Square is comparatively inexpensive. The new Union Station and Washington Square should be treated as one composition. This means such modifications of neighboring streets as will bring order out of irregularity, and provide the station, which is after all the one city gate, with an appropriate and dignified setting. There is ample space for a noble approach. All needed is a little straightening and balancing here and there. A little real estate would have to be sacrificed, and a little of the railroad land used.

The accompanying plan shows what might be done with Washington Square. It was made by Mr. T. J. Sawyer from suggestions furnished by Mr. Anderson, who is at work on the Washington Terminal proposition. It will be seen that the space between the Boston & Albany railroad tracks and Washington Square, and Grafton Street and the viaduct is given up to the new station, giving it a lengthy frontage on the square, facing north. The Warren block, under the new plan, would form one facade. Extending east from the Warren block is a row of low wooden buildings known as the Norcross property. In order to balance this part of the square, about 3000 feet of land would have to be taken. This is assessed at $5.30 per foot. The total area of this property is 6000 feet, and it is possible that the city might have to take it all. Opposite the front line of the station is the Bowker block, which forms another facade, and opposite the Warren block is land owned by the Boston & Albany Railroad Company. By taking a strip of this land the fourth facade would be formed. As the plan of the station provides for an approach to the track level with street car tracks, this part of the plan would be a green mound, which could be utilized in a decorative way according to the ideas of the railroad. There is already a decree adopted by the Board of Aldermen to widen Shrewsbury Street. On the plan presented the width is made 80 feet instead of 50, which is the plan of the decree. When the decree was made, the Washington Square location for the



DESIGN OF PLAZA FOR NEW UNION STATION.

Union Station had not been considered. As it is the intention of the city eventually to make Shrewsbury Street a boulevard to the Lake, taking the extra 30 feet can be done by utilizing railroad land.

The dotted lines show the present lines of the square and Shrewsbury Street. The black lines show how the square can be laid out to form an attractive plaza.

As will be seen by the accompanying plan, Washington Square could be made an attractive plaza, comparing favorably with that of any city. In the center could be placed a fountain or statue, adding to its attractiveness. Such an improvement could be easily worked out by the city because it is practical and comparatively inexpensive. The Norcross buildings have a frontage of about 100 feet, and an average depth of 50 feet. The site permits of any form of station building to be erected. If it is preferable to erect one solely for railroad purposes, rather than one having ample room in a multiple of stories, as illustrated in the May number of the Magazine, the square can be made as attractive. In the May number of the Magazine considerable argument was brought to bear favoring waiting-rooms and tracks within the station on the same level. As regards the comparative merits of the two plans—separation and non-separation of grades—Mr. Anderson says: "In any case it is clear that the convenience of a waiting-room on the track level is worth some sacrifice in other directions, and should be realized if due regard for other necessities permits."

WORCESTER IN THE SPANISH WAR.

"WORCESTER in the Spanish War" is the story of Companies A, C and H of the Second, and G of the Ninth Massachusetts Regiments—all Worcester companies—in the war for the liberation of Cuba, which was from May to November, 1898. This book, just issued, was written by Hon. Alfred S. Roe, a veteran of the Civil War, and is an interesting story of what Worcester did in the War of 1898. The book contains 331 pages, with many half-tone illustrations, and represents careful, painstaking work in detail on the part of the writer. As is said in the preface, in no sense is it a history of the war, but a plain statement of the part borne by the Worcester men and boys in the city's several military companies. The story itself is the outgrowth of a beginning made in the Worcester Magazine, the Board of Trade publication, November, 1902, when a résumé of the part borne in the Spanish War by A Company, or the City Guards, was undertaken. Mr. Roe was editor of the Magazine at that time, and made this story a feature of several numbers, in which the several Worcester companies figured with prominence. To make certain that the story is correct in detail, the proofs were submitted to representatives of the companies for verification.

In gathering material for this book Mr. Roe obtained the personal experiences of the veterans of the war, together with such letters and pages of diaries which they were able to keep between the marches and the battles, in which they figured prominently. The book gives a complete sketch of the departure of the men for the front, telling also of the history of each company, beginning with the City Guards, Company A, of the Second Regiment. It is an intensely interesting and inspiring story from the time of the departure of the men from the Union Station to their return to the Worcester Armory, including all their doings, the first landing on Spanish soil, the details of marches, skirmishes leading up to the battle of El Caney, and on to the Santiago surrender. The sad story of the home-coming is graphically told, including the deaths of Wor-

cester men on sea and in hospitals, and of their sufferings in camp. The strong feature of the book is its illustrations, there being more than 600 pictures of Worcester men who are familiar to everybody along the street. These are given in addition to the pictures of San Juan Hill, El Caney, Santiago, war maps, and the rough sketches of H. C. Grover, a member of one of the companies, who did some clever work in this direction. Considerable space is given to the work of the Volunteer Aid Association, and the various relief committees who did so much for the comfort of the soldiers when they returned to Montauk Point to recuperate before coming to Worcester. The picture of the cannon taken from Santiago and placed in front of the Armory to commemorate the Worcester soldiers and sailors who died in the war, is a feature of the book. Mr. Roe has faithfully portrayed in the 331 pages the honorable career of Worcester men in an honorable war, and it is a valuable addition to the histories of Worcester in other wars which are a part of the city's literature.

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The Worcester Board of Trade wants to keep on file at the Secretary's office a complete list of places where floor space can be secured for manufacturing and business purposes. There are calls made every day for such information. The Secretary would appreciate it if every owner of a building in Worcester used for manufacturing or mercantile business would furnish particulars of what he has for renting purposes, and if land-owners would also file a list of available building sites. State owner, location, whether store or factory, amount of floor space, amount of power available and approximate rental. If it is land for manufacturing purposes, state owner, location, number of square feet, general dimensions, any building thereon; if so, give floor space, number stories, brick or wood, power plant with horse power, and purposes last used. Also give name of railroad near it and side-track facilities. Give price that can be used as basis of negotiation.

This information is for the use of the Secretary, and is not to be used for any purpose except to locate new or present business interests. No compensation is to be asked for any lease or rental that may be brought about by the Board of Trade.

Historical Note — Worcester — This city, although settled in 1713, was not incorporated until 1848. The first silversmith of whom there is any record was William Swan, who, according to the inscription on his tombstone in the cemetery, "departed this life April 18, 1774, in the 59th year of his age." In the an-

nals of the First Church, Lancaster, occurs the following entry: "30 Dec. 1762, the church was informed that Bro. William Richardson had agreed with Mr. William Swan, of Worcester, to make a silver cup for the communion table equal in value to Mr. Sawyer's legacy (12 pounds), and that he was expecting the church would receive it at said table the next Lord's Day. The cup was so received." Swan was the maker of the Benjamin Pickman loving cup, now deposited in the Essex Institute, Salem.

In the early part of the last century the firm of D. Goddard & Co. were in business. In 1846, Benjamin Goddard advertises "silver spoons made to order and constantly on hand," while in the same year Daniel Goddard makes "silver spoons engraved by C. W. Rice."

No bill introduced in Congress for many years is of more importance to American labor than the Boutell Free Alcohol Bill. It provides that alcohol for use in manufacturing and the industrial arts shall be free of tax, when suitably denaturized or made undrinkable by mixture with noxious substances. Worcester manufacturers generally are in favor of the bill, and the Board of Trade has referred it to one of its committees.

J. Russel Marble, president of J. Russel Marble & Co., of Worcester, is deeply interested in the success of the bill, and says its passage in its present shape would mean not only a cheaper price for grain alcohol, but that wood alcohol used as a substitute for many purposes, would disappear entirely from the commercial world.

With the tax on, grain alcohol sells to-day by carload lots at $2.44, making the actual cost of the grain alcohol, aside from the internal revenue tax, in the neighborhood of 35 cents a gallon. Wood alcohol can be bought to-day by the carload at 60 cents a gallon.

Wood alcohol would probably never have come into existence as a commercial product, had it not been for the heavy tax on grain alcohol. With no internal revenue tax on it, however, wood alcohol, which is in every way inferior to grain alcohol, although the actual cost of its manufacture is greater than grain alcohol, costs only about 25 per cent. to-day of the price of grain alcohol.

In all the leading commercial nations of the world except the United States, a distinction is made between distilled spirits intended for beverage consumption and alcohol intended for industrial purposes. While the former is invariably taxed, and often very heavily, it is established as a sound principle of government that alcohol intended for industrial purposes should be made as cheap as possible, and all European nations have laws permitting the use of alcohol free of tax when denaturized according to official prescribed processes. In Germany (our principal rival, next to England, for the world's trade) the laws governing the industrial uses of alcohol are particularly effective.

In the United States no distinction is made between alcohol used for industrial purposes and distilled spirits intended for beverage consumption. For purposes of taxation they are both classed as distilled spirits, and subjected to a tax of $1.10 on the proof gallon of 50 per cent. alcohol. This is the normal strength of alcoholic beverages. The strength of commercial alcohol is 94 per cent., and as this is 1.88 times the strength of the proof gallon, the tax on it is nearly $2.07 per gallon.

Alcohol is easily and cheaply produced, the government chemists of the Department of Agriculture reporting that under present conditions alcohol testing 94 per cent. could, if not taxed, be sold profitably for about 15 cents per gallon, and other authorities have asserted that under a large demand and favorable conditions it would be profitable to sell it for 10 cents per gallon.

In certain manufactures where alcohol was formerly employed the manufacturers have been forced to adopt substitutes, usually more expensive than untaxed alcohol would be, generally less advantageous, and in many instances dangerous. Among such substitutes are wood alcohol, benzole, naptha, acetone, acetic acid, carbon bisulphide, borax and boracic acid, benzine, gasoline and many others. All these substitutes for grain alcohol are free from internal revenue tax, and they are resorted to not because they are better than grain alcohol, but solely because of the necessity of using a cheaper agent than tax-paid grain alcohol. Thus we have different domestic materials capable of use for the same purpose in industrial pursuits, all free from taxation, except alcohol made from farm products, which is taxed by the government to the extent of 1300 per cent. Comment upon the unjust discrimination of such a system seems unnecessary.

The action of the National Board of Trade, representing the commercial organizations of the United States, in urging the passage of the bill, reflects, however, the feelings of those directly interested in the passage of the bill.

THE WORCESTER MAGAZINE

Vol. VIII. SEPTEMBER--1905 No. 9.

Magazine and Municipal Comment.
Representative Worcester Residences.
The Protection of Workingmen.
Green Hill for a Public Park.
Massachusetts Franchise Tax.
Board of Trade Notes.

DEVOTED TO

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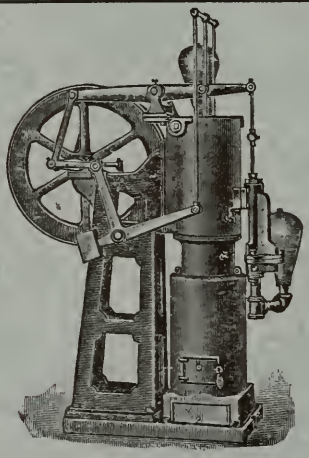

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"ELMARION"—RESIDENCE OF MR. HARRY W. GODDARD.

The Worcester Magazine.

VOL. VIII. SEPTEMBER, 1905. NO. 9.

This magazine is published by the Worcester Board of Trade. Its reading pages are devoted solely to municipal development, good citizenship and the business welfare of Worcester. Space in these pages is not for sale.

MAGAZINE AND MUNICIPAL COMMENT.

Green Hill Farm as a Park

Worcester has an opportunity to own one of the most beautiful natural parks in the United States. This is the property known as Green Hill farm, which was for many years the country residence of Andrew H. Green, the father of Greater New York. It comprises more than 500 acres, and the heirs of the estate have under consideration a proposition which they will make to the city, under the terms of which this magnificent tract of land may be acquired as a public park to be forever held by the city for park purposes. The amount the city will have to pay has not been made public, but it will be considerably less than the assessed valuation of the land, which is upward of $100,000. The Green Hill property comprises the largest tract of land owned by any individual within the city limits. Compared with the cultivated parks its size is about thirty times greater than Institute Park, the gem of the cultivated parks system. The property includes a beautiful lake, around which much has been done to beautify it, and would hardly need changing to be adapted to park purposes.

Upon entering these grounds the most commanding view of the city is obtained. Upon the brow of the first hill, overlooking practically the entire city, is the old family mansion, which has been occupied for many years, and which Mr. Andrew H. Green made his home during the summer months. Several suggestions have been made as to what use could be made of this part of the park. A practical suggestion is that it be used as a natural history building. It certainly is an ideal place for such a building, if the tract is to be used for park purposes. As it was for so many years the summer home of one of America's most progressive business men, and as it has so many historical facts connected with it, the heirs naturally desire that it should forever stand as a monument to Mr. Green's memory. It is for this reason that one of the few conditions which will be included in the offer will be that the property, after passing into the hands of the city, and into the control of the Parks Commission, shall bear the name of Green Hill Park forever. While little discussion has arisen from this proposed offer, it is likely that a formal proposition will be followed by more or less controversy. The argument that the city has not the available funds to make the purchase, or that it does not necessarily need such a tract of land for park purposes, is certain to be brought for-

ward. What the cost of maintenance of such a park would be is not definitely known. It could not be large, because the grounds have been kept up in the best of condition during these many years, and the hay crop, fruit crop, and income from a quarry would go a long way toward a maintenance account. The proposition, when it does come, is one that should be weighed carefully. It is an opportunity Worcester has not had for many years. Lake Park, about one-fifth the size of Green Hill farm, was given to the city. It is a breathing spot which could not be done away with in these days of parks and playgrounds, which is an important factor of municipal life. Green Hill Park is the most beautiful tract of land in the city of Worcester. Does Worcester appreciate this fact?

Worcester's Crowded Corner

The proposition to extend Norwich Street from Mechanic to Front, thus relieving the congestion at Harrington Corner, which is and has been for many years a downright nuisance, has been killed. The Board of Aldermen put the matter high on the shelf by a vote of five to three, Aldermen Chamberlain, Connolly and Scrimgeour being in favor of the extension. The reason given is that the improvement was too costly, reaching possibly $300,000. There was some talk that selfish methods were introduced. At any rate the proposition is dead. Harrington Corner will still remain the central spot of Worcester, with its hundreds of street cars turning the corner in various directions, blocking traffic and checking public travel. Perhaps some day Worcester will realize the need of relieving the crowded conditions which now exist at the "four corners" business section.

Record of Three Hundred Years

Jamestown, Va., is to celebrate its three hundredth birthday on May 13, 1907, and as there are few places in this country which can boast of such an antiquity, the people of that place intend to make this an anniversary of a national character. There will be an exposition, with exhibition grounds such as have not been seen elsewhere in this country, for, with a wise foresight, the city fathers of Jamestown, as long ago as last fall, began the setting out of trees and decorative shrubs on their grounds. Hundreds of thousands of flowering dogwoods, willows, laurels, water oaks, maples and other plants, have been set out, with the idea that they will be at their best two years hence, when the world is invited to participate in the Jamestown exhibition. The natural features have been conserved as much as possible, and the grounds thus laid out and planted should be of especial beauty, as well as of interest from a horticultural point of view. One trouble with the world's fairs and expositions in this country has been that the horticultural features have not been attended to in advance, and the Jamestown enterprise should be followed by other expositions in the future.

Leaves Money for Parks

William A. Richardson was a wealthy recluse living in unattractive quarters in a Main Street block. Much of his time during the warm season was passed in the public parks, and the few who knew him intimately were well known to the fact that he was an admirer of nature. He had expressed his views relative to the development of the parks system, and was not afraid to criticise in the newspapers some of the things the commissioners were doing. He did not agree with the commissioners in much that was being done. Now that he is dead, the public learns that his estate, estimated to be worth $200,000, is left for the development of the Worcester park system. The bequest is made on the express condition that no animals (except aquatic birds in the meres) shall ever be kept in Elm Park, including Newton Hill.

Another provision is that the public use of carriages and bicycles should be prohibited in that part of Elm Park between the boulevard and Agricultural Street, and the testator considered that they should be forever barred.

The first condition of the will provides that no more carriage-ways or road-

ways be constructed on Newton Hill. The bequest also provides that no tower of wood, iron or stone, or building or structure of any kind, shall be constructed on the summit of Newton Hill for any purpose whatever. It says that, save for the flagstaff, the present roadway up the hill and a pavilion or two on its declivities, this eminence should always be preserved intact.

Massachusetts Corporation Laws

For two years the new Massachusetts business corporation law has been in operation, and the total of concerns incorporating has shown a considerable increase. The fears of those who imagined that the passage of the law would lead to the formation of billion-dollar trusts, with little or no actual working capital, have not been realized. The total number of incorporations in the two years since the law went into effect is 2197, and the total new capital is about $130,000,000, divided nearly evenly between the two years. This would give an average capitalization of about $60,000. The people who have invested money in these corporations have looked into the investments for themselves, it is presumed, and have not taken the fact that the company had a Massachusetts charter as a guarantee given by the State of the solvency of the corporation. Under the old system, the assumed protection of the State to the investor did not amount to much, anyway, and the fiction has now been disposed of without doing the State any particular harm. A Massachusetts charter still has a certain value, but it is the men forming and administering the affairs of a company that interest the investor more than the form of incorporation.

Will Watch Results

Legislators and automobilists all over the country will watch with interest the experiment of the State of New Jersey in passing a law doing away with all local speed restrictions on automobiles, and permitting a maximum speed of twenty miles an hour in cities and towns, and everywhere throughout the State. If a man drives his machine at thirty miles an hour, he can be arrested, or if he runs in a race or on a wager or to make a speed record. He may be fined for any of these doings, or he may be put in jail for ten days. The Governor signs the bill with the comment that he wants it to have a year's trial, and then if it does not work well it can be repealed. It certainly gives very much more freedom in speed than is the case elsewhere, and it is for the automobilists to show whether they will not abuse the privileges it gives them. The bill will take away from small towns the power to make regulations that practically exclude automobiles from their roads, which is one reform the men in this sport have always asked.

Cannot Widen Foster Street

With the Norwich Street proposition killed, and the Lake cars, numbering hundreds every day, running around Harrington Corner and around Foster Street, the suggestion has been made that the latter street be widened from the line of the Worcester National Bank to Main Street. The street is exceptionally narrow at that point. There is not room on the north side of the street for a wagon to pass a car, and hardly room on the south side. Here is where all the Lake cars are obliged to run. Had Norwich Street been extended, the Lake cars could have used that as their exit from Front to Foster Street. Continental Hall being destroyed to make room for a bank building, it was thought the time was appropriate to widen the street. As the building lot is small, and conditions arose which prevented a larger bank block, it has been found practically impossible to improve the street at this point. It is too bad, but there is no help for it.

Excuses for Excessive Speed

When the complete history of the automobile is written, it is to be hoped its pages may be lightened by stories of excuses offered by those haled into court for exceeding the speed limit. There will be no need to wonder from the court reporter's exact account of these excuses —just as they stand, word for word, they may be used. A good many, of

course, pay their fines, walk out and say nothing, thinking probably that 'tis better so, as much talking might complicate the case. But a few others, of the sort who would almost rather die than admit they are in the wrong, are prepared to argue till they are black in the face against their accusers; while the persons who cannot abide the idea of parting with the fine of ten or fifteen dollars exacted grow eloquent in giving reasons for evading punishment. All told, these asides of the court-room might be turned into very entertaining reading for all except those who have helped to contribute them.

Give Worcester a Ticket Office

The quarterly statement of the New York, New Haven & Hartford Railroad earning is a remarkable showing. Not only are the earnings the greatest ever made in the history of the road, but while the gross earnings showed an increase of more than $1,000,000, the expenses for the three months had been decreased by more than half that amount. A better organization of the operating department has been responsible for a part of the curtailment of expenses, but reductions have also been accomplished by cutting off fifty per cent. in demurrage charges and using the company's equipment to better advantage. Yet the amounts expended for betterments and improvements have not been decreased, and there has been rather an improvement than an impairment of service.

With this splendid showing it would be liberal on the part of the road if it would give enough attention to the accommodation of the traveling public to maintain an uptown ticket office in Worcester. On July 1 the New Haven road closed its uptown ticket office in this city. There is no telephone connection with Union Station ticket office. If a patron of the road desires any information concerning trains or boats, it is necessary to make a trip to Union Station.

To Help the Exporter

The Bureau of Manufactures of the Department of Commerce and Labor plans to do what should be done by every board of trade or manufacturers' organization in the country. That is to establish a comprehensive card index, which will enable the department, upon application, to furnish information desired by manufacturers or by intending purchasers. The purpose of this work is to extend the foreign trade of the United States. The blank sent out to be filled requests the name of the concern, location of branch establishments, description of product, capital invested, capacity per day, month or year, where product is sold, and other information. Worcester being an important manufacturing city, and from which many goods are exported, it should be interested in this proposition.

Goods Must be Superior

The financial supplement of the London Times gives a suggestive report concerning Canada's preferential tariff. In discussing the contest for Canadian trade it says: The fight for the markets of Canada is between Great Britain and the United States, with preferential rates favoring the former, natural conditions, particularly geographical proximity with a 3000-mile boundary line with all that that means, favoring the latter. Only exceptional ability, superiority of goods, etc., can succeed in wresting from the United States any of the trade gained.

It is not on dutiable goods alone, however, that a just comparison is to be made. Great Britain is handicapped in many lines by natural conditions. Living animals, fish, breadstuffs, provisions, coffee, tea, sugar, molasses, vegetables, baking powder, green, ripe and dried fruits, nuts, grease, plants, trees, seeds, fertilizers, petroleum, paraffine, fish oils, turpentine, marble, slate, coal, grasses, wooden ware of all kinds, are not in the list of goods in which Great Britain is ever likely to be able to compete with the United States and others. This list, says the Times, is too short rather than too long. What remains is distinctly competitive, and in these Great Britain has more than thirty per cent. Last year its share was 41.73 per cent. Eliminating the articles enumerated above as

non-competitive, from the British point of view, and the two rivals will be found running neck and neck from about $30,000,000 each, in 1900, to points between $40,000,000 and $50,000,000 in 1904.

Opportunities to Increase Travel

There lies before every street railway manager a great opportunity to increase pleasure travel provided he goes about it in the right way. During July and August one company has tried the interesting experiment of running popular excursions from interior points to the beaches. The plan of stopping the sale of tickets on these cars when the seats are filled is adopted, and the cars run through without change. This is a perfectly legitimate means of increasing trolley road revenues, and it ought to be encouraged because it gives the people something they desire.

One of the most potent sources of revenue to a street railway company is pleasure travel. If the company can induce people to use their cars for pleasure, they add not only to their revenues, but make the whole community happier, healthier and more interesting to live in. There is nothing in the world of which one may get more for his money than street railway transportation, and everybody likes to get his money's worth. The street railways of New England reach more places of interest than can be found in a simliar radius almost anywhere else. When it is considered that for ten or fifteen cents one may visit a large number of places associated with the history of the nation, or may reach a park where he may spend a couple of hours free from care, it is surprising that the pleasure travel is not larger. It only needs judicious effort on the part of street railway managers to increase this kind of travel, and with it the revenues of the company, very largely.

One Hundred Years of Banking

A banking institution has just right to point with pride to a record of one hundred years of continuous business. A creditable booklet of the history of Worcester National Bank has been issued, containing a brief history of this institution, which celebrated its one hundredth anniversary last December. It is well written, the illustrations are superb, and the publication is gotten up in the most artistic manner. One of the most striking paragraphs is the first in the book: "In the inauguration of new enterprises we cannot help conceding that the men who were prominent in affairs a century ago were guided as much or even more by a consideration of the public good than by any hope of personal gain." That tells the story of the early banking and industrial life of Worcester. The early history of the Worcester National Bank is interesting, as is the early history of the city. In those days Worcester men worked for the upbuilding of Worcester. The earliest manufacturers received assistance from this bank, and the family names of Waldo and Salisbury are linked with the successful history of this banking institution, as they are with the history and upbuilding of Worcester. The statistics, which form a part of the booklet, show that in 1862 the deposits in Worcester national banks amounted to but five-eighths of the capital; they are now nearly thirteen times as large as the capital. The deposits were then $38 for each inhabitant of the city, now $117. The capital was then $63 for each inhabitant, and is now a little over $9. The review of the history of banking in Worcester brings out the remarkable change which the past forty years has brought about in the ratio of capital to the deposits in the banks, a state of things which, doubtless, applies to the whole country.

What is the Use?

And now comes a Chicago professor who says Faneuil Hall, the "Cradle of Liberty," was built with tainted money. Thus has tainted money received final vindication from the University of Chicago, and all because it nourished the germs of American freedom and sheltered the patrons who thought out the Declaration of Independence. Professor Francis W. Shepardson is the man who says Peter Faneuil, who donated the "Cradle of Liberty" to Boston, paid for it with polluted gold made by cheating the government out of liquor revenues. In other words Peter was a whiskey

smuggler. According to this Chicago man the days of graft are not now, but were in vogue a hundred years ago. He says graft, tainted money, vulgar commercialism all flourished in those days when George Washington waved the presidential sceptre. We are comparatively pure now compared with those days, and what few blemishes mar our current record can and will be obliterated. With Faneuil Hall founded with tainted money, and this on the statement of a United States authority on history, what is the use of finding fault with the way New York financial men are running things? What is the use of opening up Pennsylvania sores? What is the use of pointing a finger of scorn at any state house or at any city hall? What is the use?

Worcester's Latest Population

Worcester's population, according to the 1905 census, is 127,763. This is an increase over the figures of 1895 of 28,996, or 29.36 per cent., and over the 1900 figures of 9342, or 7.9 per cent. The percentage of increase during the last five years is much smaller than during the previous five years. This is not only true of Worcester, but of a majority of the cities and towns in the State. The percentage of growth during the past five years is below the Worcester average, dating back twenty-five years, but the average growth of population during that time of 3000 a year is nearly maintained.

Some of the city officials are disappointed at the result and suggest carelessness in taking the census, but the published figures compare well with those of the Water Department. Last year the water census showed a decided falling off in the number of water takers, and the number of vacant tenements was exceptionally large. In an examination of the school census the number of polls, number of families, number of houses, number of children of school age, and number of water takers, the ratio of increase is smaller during the period from 1900 to 1905 than during the period from 1895 to 1900. Tables made to determine population figures by a mathematical process, based upon the natural growth of population, gave an estimate of about 135,000 for Worcester in 1905. In this case the estimate is several thousand too high from the figures given out by the census bureau. Five years ago a similar table produced figures 4000 short of the result of the canvass. Worcester has a healthy growth, and there is no need of getting discouraged over the new figures. The growth is far ahead of a majority of Massachusetts cities. Lowell shows a loss of 124 from the 1900 figures, while the 1900 figures showed a gain of 10,602 over the 1895 figures. Lynn, New Bedford and Springfield made a good showing in the last five years. Lynn gained 8542 during the last five years as against 6169 the previous five years: New Bedford gained 11,879 in the last five years as against 7191 the previous five years; Springfield gained 11,425 during the past five years, as against 10,507 the previous five years, and yet Springfield is disappointed at the result.

The total result in Worcester County is: 1905, 361,844; 1900, 346,948; 1895, 306,445; gain in ten years, 55,399; per cent. gain, 18.18.

No Complaint is Heard

The general condition of the machinery market in New England is good. Complaints are the exception rather than the rule, and the tone of Worcester manufacturers is cheerful. This is particularly true of the machine tools and machine equipment makers. Referring to the condition of things in New England the Worcester correspondent of the Iron Age says the labor problem is pleasantly different from what it has been in other recent inaugurations of periods of unusual prosperity, in that skilled labor is becoming more and more difficult to procure, which is in sharp contrast to the forebodings of strikes, which have menaced the metal industries of New England during the past few years.

These two elements, the absence of labor troubles and the scarcity of labor, promise to combine to give a fresh and altogether desirable impetus to the apprentice system, which has been permitted to lag to such an extent as to be responsible for a large part of the present problem of procuring the best of help in the metal lines of manufacture.

REPRESENTATIVE WORCESTER RESIDENCES—ELMARION.

THE article in the August number of the Magazine descriptive of the residence of Mr. Austin P. Cristy on Salisbury Street was confined exclusively to that type of architecture known as the southern colonial type, which is derived and modernized from the best type of Georgian architecture. The accompanying frontispiece gave Worcester residents their first portrayal of this residence known as one of the most attractive in the city. The other type of colonial architecture is found in Elmarion, the home of Mr. Harry W. Goddard, president of the Spencer Wire Company and of the Worcester Board of Trade. This residence at the corner of Park Avenue and Salisbury Street is a representative type of a New England colonial residence, and of its kind is the best representation found among Worcester's residences. It is more specifically the severe type of this style of architecture, and, situated as it is in the wooded shade of a spacious lot, is the more attractive.

It is situated about 150 feet back of Park Avenue, facing Institute Park, and about fifty feet back from Salisbury Street, and there is sufficient land surrounding to give ample opportunity for splendid approaches and beautiful landscaping. The basement story is of splendidly cut New Hampshire granite, with steps of the same, the entrance being buttressed. Above this story the residence is a frame building with clapboards and shingled roof. Across its front is a spacious uncovered terrace, 43 x 12 feet. The residence is entered through a vestibule with tile floor, fitted by seats at one end, and lighted by leaded glass side and top lights. Out of this is the reception hall, from which opens the main staircase hall, which is spacious, and finished in selected red birch with paneled dadoes. Out of the reception hall at the south opens a library 16 x 18 feet, finished in dark Flemish oak, fitted with bookcases, seats, generous fireplace and artistic mantel.

Opening to the north from the reception hall is a dining-room in the form of an ellipse, 16 x 20 feet. This is finished in Mexican mahogany, high paneled dado, ornate ceiling in beamwork, and with a fireplace prominently situated. There are cabinets for decorative china built into the wall. The living room occupies the entire width of the building on the Salisbury Street end. It is 16 x 26 feet, with roomy bays on either end and a large fireplace on the side opposite the entrance. This room is finished in selected stained cypress, dadoed up in panels, and the ceiling is heavily beamed with the same material. Opening from the living room is the veranda on the Salisbury Street side, which is entered through a French window.

The reception-room is finished in white paint and opens from the staircase hall by a wide arched opening ornamented with columns and pilasters. The carriage entrance is on the westerly side, opening into a vestibule, and from there to the staircase hall. There is a well-appointed service department, with serving-rooms, kitchen and pantries. This is at the extreme northerly end of the building. The second story is reached by an ornate staircase lighted by handsome stained glass windows on the midway landing, and is occupied exclusively by sleeping rooms and baths. The billiard room is on the third floor, and is finished in cypress stained dark brown. The walls are covered with red floss surmounted by a very interesting typical frieze. The floors throughout the residence are of hard wood, the rugs, furnishings and other equipments being in keeping with this style of residence.

THE PROTECTION OF WORKINGMEN.

THE protection of workmen by the State is one phase of the labor problem which has attracted students of economics in this country. President Carroll D. Wright of Clark University, at a meeting of the Worcester Economic Club, went into the question of labor problems as they affect employer and employee when he talked on "Economic Insecurity." He said the problem of economic insecurity is how to care for the workers in industry when they have become incapacitated through accident, sickness, or old age. This problem is one peculiar to our time and to the wages system, which system is, on the whole, as every sane man must perceive and admit, a vast improvement on anything which preceded it.

While the problem has existed, its recognition is only recent, and many states and nations are attempting its solution. It is now complicated by the tendency to discard the services of a man as he approaches the age of 50. Under the stress and intensity of modern industry, skill, facility of action, and the power to work at a given speed are necessities.

The working man, of all men, will not accept charity. He is independent; as a rule, generous and honorable; and the most he asks, while he is in possession of his physical powers and mental faculty, is labor at remunerative rates. He wants no soup-houses for his benefit; he wants no fund raised to enable him to live, and, above all, he does not wish to become a tramp. Yet he has expended his forces for the benefit of industrial society, and at the close of this expenditure he finds himself without means to protect his life and that of his family in the future. His only capital has been impaired.

The emancipation of labor—that is, the right of the working man to make a contract for himself—carries with it burdens and responsibilities which can be met only through an intelligent comprehension of all the conditions surrounding it. The great labor question means the struggle of humanity of a higher standard of life, and if this higher standard of life is to be reached, the problem of economic insecurity must be solved, either partially or wholly.

Studying the field from the point of view of the legislator, and inquiring what methods he may approve or adopt for lessening the insecurity accompanying our industrial system, we find four systems:

First, the system of compulsory state insurance, organized and carried out by the State as it exists, through the extension of its functions and without the revolutionary attributes which must accompany the inauguration of social democracy.

Second, a system in which the action of the State secures what may be called voluntary state insurance, where, instead of compelling working men to insure themselves, the State endeavors by the creation of suitable institutions and the offering of special inducements to lead working men voluntarily to insure themselves.

Third, the creation of institutions through private organization, controlled and aided by the State. Such a system, of course, would be an intermediary one between state insurance and purely voluntary institutional insurance. It does not involve any deliberate creation of a state scheme, but where the laboring people have organized purely voluntary institutions for their mutual assistance, in cases of sickness or accident, the State enacts special legislation in regard to them.

Fourth, insurance funds voluntarily created by employers for the sole purpose of aiding their employees in cases of sickness or accident, or of providing them with a moderate pension when they are too old to work.

With these suggestions from President Wright, and further information furnished from government sources, the insurance problem becomes interesting.

There is perhaps no country in the

world where workmen are so protected by the state, or are so cared for, as in Germany. Even clerks, shop assistants, and servants are compelled to insure. This insurance is effected by pasting into a book certain stamps every week, and it is the duty of every employer to see that this is faithfully done.

In the German Empire there are three insurances for workmen, all of which are obligatory and under the authority of the imperial insurance office, viz.: sickness, accident, old age, or infirmity. This insurance is mutual, and its administration autonomous under state control. It embraces, without distinction of nationality, all persons working in Germany.

Insurance against sickness is especially for those occupied in industry and commerce receiving a yearly salary of $480 or more; but the law allows other workmen, comprising domestic servants, voluntarily to take advantage of it. It has 22,672 local offices, and 9,500,000 workmen get the yearly benefit of $36,500,000. The object of this insurance is to guarantee to the insured a sure and efficacious aid for at least thirteen weeks from the beginning of sickness.

The minimum advantages to which all insured have a right are:

1. The free services of a physician of the local bureau, or, in case of urgency, of any physician.

2. In case of inability to work, daily assistance (50 per cent. of daily salary), beginning from the third day of sickness, or the gratuitous services of a hospital with 25 per cent. of the daily salary given to the family.

3. In case of death, funeral expenses equal to twenty times the daily salary.

4. Four weeks' gratuitous aid in childbirth.

5. Double insurance to any one paying double.

6. Any one falling sick in a locality outside his own is cared for by that locality, the expenses being reimbursed by the home locality.

7. No sick persons, whoever they are, can be excluded from their insurance rights.

8. When disability still exists at the end of thirteen weeks the sick have a right to another thirteen weeks of gratuitous medical service before benefiting by the law for the disabled.

In 1898 there were 3,276,500 German workmen insured against sickness, the gratuitous services to whom amounted to over $33,000,000, while the expense of administration cost only $1,973,232.

When an insured person falls sick in a locality not his own, his home bureau can ask the bureau of the locality where he is to take care of him, which is done until the insured is able to be sent home. When the insured falls sick in a foreign country, his employer looks after him and is reimbursed by the local bureau. Public assistance given in case of urgency is also reimbursed by the local bureau. No sickness is excluded from the benefit of insurance. If the sickness or disability is due to a row, or fight, money, but not medical aid, can be refused.

The law limits the assessment of members for communal insurance against sickness from 1 to 1.33 per cent. of the average earnings of an ordinary workman, and from 2 to 3 per cent. for other bureaus. It also compels the employers to pay a supplement of one-half of what his employees pay. Two-thirds of the assessments are therefore furnished by the workmen and one-third by the employers. The bureaus of all insurance against sickness are administered by those interested, the employers and employees, under the direction of the local authorities.

Workmen in the industries and in agriculture, etc., farmers, renters, day workmen, etc., gaining less than $482, must insure against accident. In certain cases those gaining more than $482 are allowed, and sometimes compelled, to insure. A complementary law insures soldiers against accident, and the aid to all the employed in the empire embraced in the insurance law against accident, is in the form of state pensions. This insurance is an employers' mutual insurance with a state guaranty, and its bureaus have a civil personality with complete administrative independence.

Every one insured in case of accident during work at a wage has right to gratuitous medical treatment. If the

wounded is not insured against sickness, the owner of the establishment in which he is employed must accord to him from his private purse the same treatment he would have received from the bureau of insurance against sickness had he been insured therein. If the wounded is also insured against sickness, his pecuniary aid can amount to two-thirds of his wages. Builders and farm and forest workmen are treated for the first thirteen weeks at the expense of the commune in which the accident occurred. To prevent the necessity of paying a pension of disability the accident insurance bureaus are authorized, whenever it seems that the bureaus of insurance against sickness are unable to furnish the necessary assistance, to take the treatment of the patient in charge. These bureaus are not compelled to indemnify the wounded, but in some cases they can allow pecuniary aid. Gratuitous care in a hospital, beginning with the fourteenth week, can replace the expense of treatment and provisional pension. The admission to a hospital comprises gratuitous attendance, the expense of going and returning, and clothing, and, during the treatment, an indemnity to the family of the victim, to which indemnity a wife, though married after the accident, has a right.

Accident insurance pensions are not calculated according to the personal gain of the victim, but according to the average wages fixed by age and sex. The amount paid in by employers is not determined by the number of workmen employed, but by their direct taxes. Small proprietors can be exempted, totally or partially, from any dues.

Perhaps one or two examples would show more clearly the work of German accident insurance:

A mason, married, earning $305, falls from a scaffolding, breaking his leg. The first three weeks he is looked after, and all expenses paid, by the bureau of insurance against sickness. Beginning with the ninety-first day he is treated for ninety days more in the hospital at the expense ($75) of the bureau of accident insurance. His family, a wife and two children, are paid $38. If, at the end of twenty-six weeks, he is totally unable to work, he receives an annual pension of $203.25. Should he die from the accident the bureau pays $20 as burial expenses, and the wife and children, if the two latter are less than fifteen years of age, receive $153, and the widow receives a pension until she dies or remarries, and the children until they reach the age of fifteen.

A blacksmith earning $256 accidentally loses a finger. The diminution of his capacity to work is indemnified by a payment of 10 per cent. of his wages and an annual pension of $17.

A farm hand injures his knee. He receives one hundred and five days' treatment in the hospital, which costs the rural accident bureau $38. His family is given $19, or one-seventh of the average annual wages. Upon leaving the hospital the man has lost 90 per cent. of his capacity to work, and so receives an annual pension of $78. If he dies, the accident bureau pays the burial expenses of $9, and pays annually to his family $65.

This insurance in the German Empire is obligatory from the sixteenth year, and embraces every workman earning over $482. It is optional for workmen whose annual earnings are more than $724. The resources for this insurance are furnished by the employer, the employed, and the state, the latter giving toward each pension a uniform subvention of $12, and paying the workman's dues during the time he is serving his military term. All remaining expenses are shared equally by the employer and employee, who pay according to the five classes into which the imperial insurance office has arranged the insured, viz.: (1) Workmen gaining no more than $84 pay 3.3 cents per week; (2) a wage not greater than $133 pays 4.8 cents weekly; (3) a maximum wage of $205 pays 5.8 cents; (4) a maximum wage of $277 pays 7.24 cents, and (5) a wage between $277 and $482.50 pays 8.68 cents weekly. The amount paid by the workmen is deposited in the bureau by the employer, who buys special stamps and affixes them to the employee's receipt, after having deducted from his wages the amount due.

The minimum of a disability or infirmity pension, which is not allowed for less than two hundred weeks' work, is $28 for the first class, $31 for the second, $32.50 for the third, $34 for the fourth, and $36 for the fifth class. After fifty years, or two thousand weeks of work, these pensions are increased to $44.75 for the first class, $65 for the second, $79.50 for the third, $94 for the fourth, and $108.50 for the fifth.

An old-age pension is paid to every insured workman of seventy years or over who has deposited not less than 1200 weekly dues. The dues deposited for the employee by the state during military service is counted among these 1200 as well as temporary interruptions. Old-age pensions of the first class amount to $26, second class $34, third class $41, fourth class $48, and fifth class $55.50.

There are well-governed rules for the insurance of workmen in other countries, the question of insurance for workmen having received practical solution.

For the last fifteen years a workman's insurance committee has existed in Sweden, and since 1886 the Riksdag has put aside yearly $428,800, which sum is to cover the first expense when the law for the insurance of workmen is voted. The maritime city of Gottenborg, so renowned for its excellent habitations for workmen, its public assistance, its administration, etc., is the first city in the world to solve successfully the question of insurance for workmen employed in the city's public works. The number of these in Gottenborg is 1500. In 1891 the municipality voted that a retiring pension should be accorded all superintendents, chiefs, inspectors, and workmen employed by the city. To come into possession of this pension one must be sixty-five years old, and have served the city for thirty years. Special occasion allows the pension to be granted at sixty-five years of age and twenty-five years of service. The latest law of 1898 divides the pensions into five classes, the first of which gets $289, the second $193, the third $145, the fourth $96, and the fifth $80. The sums of the first four of these equal 60 per cent. of the annual salary.

On October 25, 1899, the Federal Council of Switzerland voted, in every canton, a compulsory insurance law against sickness and accident, based, with a few modifications, upon the principles of the German law. This failed to satisfy the people, and it was rejected May 20, 1900, by a vote of 341,914 against 148,035. The Federal Council some time after asked the permanent commission of working men's insurance to draft a new law better suited to the needs of the country. It is also a question in Switzerland to create compulsory insurance against old age. At present railroad and steamboat workmen are admitted to the pensions created by these two enterprises. These pensions are under the control and supervision of the state.

A pension of $87 is allowed by the government of New Zealand to the indigent aged who have inhabited the country uninterruptedly for twenty-five years without any legal condemnation. Every old person who has come to the pension age gets the entire pension, if he has a personal revenue of $164 or more. For each $4.80 above, the law diminishes his pension accordingly.

In England there is a voluntary insurance against disability, which assures to those employed in industrial or agricultural labor and who do not gain more than $480 a year, an annuity as high as $480, of which the average, however, is $85.

In Belgium the insurance against accident and disability is obligatory for miners. Moreover, since January 1, 1900, the government has a national fund for retiring pensions, which is voluntary, and insures to each of its members when sixty-five years old a pension of $69.50.

The insurance of miners has also been compulsory in Austria since 1889. The least insurance is $41 for men and $20.50 for women. Insurance against sickness and accident is also obligatory for those employed in industrial and agricultural pursuits, but accident insurance can in no case exceed 60 per cent. of the annual wages.

From the sixtieth year in Denmark the needy receive help in varying pro-

portion, the state and commune contributing equally.

In Norway accident insurance for all industrially employed workmen whose salary does not exceed $290 is compulsory.

In Hungary insurance is obligatory for employees of both sexes working in industrial establishments, mines, furnaces, quarries, dock yards, railroads, interior navigation, posts, telegraphs and telephones, and in commerce if their wages do not exceed $2.15 a day. All members are assured (1) free medical treatment, together with medicine, for twenty weeks; (2) food for at least twenty weeks; (3) aid in childbirth, and (4) burial expenses.

There exists in Italy a voluntary insurance against sickness and disability, and an obligatory insurance against accidents. For a disability pension one must have been insured for twenty-five years and be sixty years old.

All workmen in Finland are authorized to insure against sickness, the cost of which is borne equally by the employer and employee. All differences are settled by arbitration. Every workman in an industrial establishment gaining more than $145 is compelled to insure against accidents. The accident fund, to which the workman contributes nothing, is created by the employers and the state.

The safety of the world depends upon the individual. I do not criticise individuals nor misrepresent parties, but I wish to impress upon you that it is needful and important for the elector to rise above the low levels of partisanship to the exalted plain of statesmanship. The spirit of the last half century was progressive. The spirit of the twentieth century will be progressive. Judging the future by the past is there reason to doubt that the commands most in harmony with the spirit of the century will gather most from the rich harvest of progress? Correct principles, correct policies, correct methods always have and always will and always must bring favorable results. Policies and methods are not right because advocated by good men. Incorrect policies are not incorrect because supported by bad men. The personnel of adherence does not distinguish truth from error. This is the gospel of American progress and we should teach these principles and policies which have made us what we are.—Secretary Leslie A. Shaw, of the Treasury Department.

GREEN HILL FOR A PUBLIC PARK.

TO the thousands who have made Green Hill the scene of many a pleasant Sunday afternoon ramble, the announcement a short time ago that it is possible for the city to acquire this entire property for park purposes was as interesting a piece of news as the daily papers have offered all summer.

The generous spirit of the owner, who has for years not only permitted but welcomed visitors to the grounds, has made this great estate as much a public institution as Newton Hill or Lake Park. So many people have enjoyed so greatly the privileges they have had there that the disposition that is to be made of this finely developed park-farm is a matter of much general concern.

Realizing the benefit it has been to the city to have such a place, where all were free to go so long as they respected the very reasonable restrictions of the owner, these people know how great the public loss would be to have Green Hill made inaccessible through either a less hospitable policy on the part of new owners or their yielding to the commercial temptation to cut the hundreds of acres into building lots for development by some energetic real estate operator.

A park cannot be made in a year or a score of years. Develop a piece of ground by the expenditure of unlimited capital under the direction of the most skillful engineers and you cannot give it the fine tone that age will produce. The word "park," through association with what frequently go by that name—mere garden plots, with highly-colored flower beds dropped in here and there—does not give an accurate picture of the ideal place for the enjoyment of outdoor life. It carries with it a suggestion of artificiality that mars. But the true idea of a park is a place where nature is seen at her best. The word was never better employed than in describing the great government reservation on the Yellowstone, where attempts at artificial "improvements" would be ridiculous. So in any reservation that is intended as a relief for those who are tired by the hard grind of city life, it is in proportion to its naturalness that it meets the purpose for which it was designed.

Those who went to Green Hill found a place that was as nature intended it to be. Although it had not been allowed to run wild, it was developed along natural rather than artificial lines. The result could not be otherwise than pleasing. The real out-of-doors tone was there. In the first place the original Green farm was old land. One hundred and fifty-two years ago it was in the possession of the Indians, and then it came into the possession of the Green family. For nearly a century and a quarter the tract of land, at least such part as was under cultivation, was used for farming.

When Mr. Martin Green came back to his old home thirty-three years ago, and took charge of the development of the old homestead into one of the finest estates in New England, he had a fine old farm to start with. His brother, Mr. Andrew H. Green, was anxious to carry out at his Worcester home some of the ideas that had come to him when he was interested in the Central Park, New York. Thoroughness was one of the foundation principles of his character, and the brothers were in accord in the opinion that the development of Green Hill should be along natural lines. Since that time considerable tracts of land have been acquired, so that the estate now embraces more acres than when it first came into the hands of the family. The present acreage is considerably in excess of five hundred. But more important than the quantity of the additions has been the character of the development. The "Father of Greater New York" could get no pleasure out of doing violence to nature's plan for the adornment of one of the picturesque spots in New England. His brother's natural inclination, together with his professional training as a civil engineer, fitted him for carrying out the plans that were agreed upon.

The public has long considered itself

fortunate that it could walk through the two hundred acres of woodland, climb over the quarries, or take long strolls through "stump-pasture." Quite naturally some parts of the estate have been reserved for the use of the members of the family, and to these and from the cultivated grounds most of the visitors have not had access. Except for those whose enthusiasm for the Norse sport of skeeing led them to the hill in winter, there are few comparatively who have seen the fine view that is offered from the reservoir, situated on the highest bit of ground in Worcester. Indicating the extent of the view is the fact that, without the aid of glasses, the spires of fourteen churches outside of Worcester may be seen from this point.

The uneven topography of Worcester County makes the climb worth taking. Quite worth while, also, is the view from other parts of the great farm, particularly those parts overlooking Lake Quinsigamond.

What appeals with great force to men who have considered the proposition that the city acquire the property, is the fact that this is not a piece of undeveloped ground. It does not require an expenditure of thousands of dollars to make it ready for use as recreation grounds.

It has already been developed under watchful eyes, and in accordance with a plan that fitted it to be a place for thousands to take a holiday as well as for a family home. And the work has been done better than could have been done by a parks commission, which has to trim its plans to the measure of the generosity of a city council.

Every improvement was made with the idea that the work should be permanent, and endurance was more sought after than low cost of construction.

So it is that the mansion was constructed and equipped with an independent water supply, that there was built a reservoir with a capacity of 2,000,000 gallons, from which an underground system of pipes carries water to the barns and the gardens, that the course of a brook supplied by springs of purest water was stopped by a dam, resulting in an attractive little pond, that farm buildings were built and stocked. The same thought of permanency prevailed everywhere.

The suggestion that the mansion be used as a home for the Natural History Society is a recognition of the important work that organization is doing. Hardly would it be possible to imagine a more admirable location than this. Fortunate, indeed, may the society consider itself if the problem of its new home is thus solved.

The cost of maintenance must be considered, but it must be remembered that the farm has resources which would bring in a considerable income if they are managed as at present. Unquestionably the property is most valuable, and its proximity to the centre of the city makes it easily accessible. A fifteen-minute car ride from City Hall takes one to the estate. The accessibility is emphasized when it is compared with the relative locations of the reserves of the Metropolitan Parks System to the centres of population of the districts they serve. Worcester has been proud of her park system, with good reason. The city has some admirable breathing places. They have been well laid out, and are carefully cared for, but there are none too many.

A fact that must be borne in mind when Worcester's parks are being discussed is that the city has no harbor and beaches that contribute so largely to the enjoyment of residents of coast cities during the warm months. It would seem to thousands a personal loss to themselves as well as a loss to the city if the gates of Green Hill were no longer open to them.

As it stands, the estate is a park meeting the most exacting definition of the word. Possibly it would contribute to the enjoyment of some if places for outdoor games were provided, a not expensive proceeding. There is room there for what the city now lacks—public golf links and public tennis courts, as well as for a baseball diamond and other playground features, if they be desired. But the very size of the estate is its great attraction. It is so big that it will always remain a natural park—a place where people may go to get a taste of real out-of-doors.

B. F. Felt.

MASSACHUSETTS FRANCHISE TAX—LOCAL DISTRIBUTION.

[The following article is published, with some modifications, upon suggestion of a tax official. Considerable of the data is taken from an article by Mr. Frederick A. Wood, a writer on tax and municipal affairs.]

THE Massachusetts system of taxing domestic corporations may be outlined in a few words. The permanent state tax commissioner is given large resources for ascertaining the total value of the property and franchise of each corporation. The local assessors and the officers of the companies must make returns to his office, and he has authority to examine books. The main objective is to get the market value of the stock issue. This is regarded as the true worth of the property and franchise. Real estate and machinery are taxed locally at the valuations determined by the assessors. From the true worth of the whole property and franchise the following deductions are made: In the case of interstate railway and telegraph companies, the value of the real estate and machinery in Massachusetts and such portion of the whole valuation as is proportional to the length of that part of the line lying without the State; in the case of telephone companies, so much of the whole valuation as is proportional to the number of telephones used or controlled by them without the State, as well as the value of all stock in other corporations held by them on which taxes have been paid; in the case of insurance companies, the value of mortgages on real estate held by them subject to local taxation, and, in the case of all other corporations, the value of the real estate and machinery which is taxed within or without the State. These deductions from the total worth of the corporations leave the valuations on which the franchise tax, or the tax on "corporate excess," is levied. The rate fixed for this tax is the average rate of property taxation.

The financial officers of the corporations pay their assessments to the State Treasurer, who retains for State use the proportion of the assessment on each company which corresponds to the number of stockholders who live without the State, while to each town and city is sent the proportion which corresponds to the number of stockholders living in that town or city. Thus the tax is regarded as one on personal property, to be met really by the owners of the shares, although the corporations make the payments. It should be said that the corporation tax law does not apply to banks, savings banks and certain kinds of insurance companies, for which special methods of taxation are provided, and that the rule regarding distribution of receipts has been changed in the case of street railways.

Upon the whole, the system appears to be acceptable to the people of the State, except as to the manner in which the revenue is locally distributed. This works a measure of injustice between different classes of communities. The commission of 1897 pointed out this defect, showing that in 1896 eighteen towns received of the proceeds of the tax on corporate excess five times as much per capita as the average for the State. More specifically, the amount of this tax distributed to all the cities and towns of the State was $1.03 per capita, that distributed to thirty-two cities was $1.08 per capita, that going to all the towns was 93 cents per capita, that allotted to eighteen towns was $5.31 per capita, while that belonging to 303 towns was 59 cents per capita.

Substantially the same relative difference in local receipts exists to-day. The eighteen towns, of course, are those in which the large stockholders of Massachusetts corporations have their residence. These places are sometimes denominated "tax-dodging towns." In

them the rates are much lower than elsewhere. The following classification of cities and towns as to the rate for each $1000 in 1901 illustrates this feature of local taxation in Massachusetts. In 17 towns the rate ranged from $5.80 to $9.80; in 2 cities and 110 towns, from $10 to $14.90; in 29 cities and 156 towns, from $15 to $19.80; in 2 cities and 34 towns, from $20 to $24, while the lowest rate was $5.18 and the highest $25. The massing of large holders of bonds and of shares in foreign companies in the first group of towns makes low rates possible, even if only a small part of such property is returned to the assessors. The distribution of the tax on the corporate excess of domestic corporations according to the residence of shareholders is a further advantage to the finances of these towns. The property from which a tax is derived may be many miles distant from the town which receives a goodly sum because several heavy stockholders live therein. If no large holdings of stock belong to the residents of the town in which the plant of the corporation is located, that town gets very little from the tax on franchises.

The special commission sought to remedy this anomalous situation by proposing that the State should retain not only that portion of the tax on corporate excess which corresponds to the holdings of stock by persons not living within the State, but also that portion which is now distributed to the cities and towns. To compensate the latter for the loss of revenue resulting from this change, it was suggested that the State assume the expenses of the counties, which are now met by taxes on general property and polls. The total of the franchise tax that is distributed to the cities and towns approximates roughly the expenses of the counties, and but a slight disturbance of local finances in the aggregate consequently would have resulted from the adoption of the commission's plan. On the other hand, the burden of taxation of the different classes of cities and towns would have been equalized and considerable relief would have been given the farming communities.

The Legislature, however, did not look with approval either upon this particular recommendation or upon the commission's scheme of tax reform as a whole. It was not altogether indifferent to the demand for a change in the manner of distributing the tax on corporate excess, but it listened to a suggestion whose consequences seem not unlikely to be of even greater significance than would be the retention by the State of the entire tax.

The report of the special street railway commission, which was making its investigation at the same time with those of the tax commission, discussed various phases of the street railway problem, and recommended, among other things, that changes be made in the taxation of the companies. These changes, in addition to two new forms of taxes—one calling for the payment to the State of the excess in dividends over 8 per cent. by companies which had declared average dividends of 6 per cent., and the other imposing an excise upon gross receipts for the benefit of cities and towns through which the lines of the companies pass—involved distribution of the corporate excess derived from the general corporation tax on the basis of trackage. These three proposals in regard to the taxes on street railways were adopted by the Legislature of 1898.

Without discussing the wisdom of placing upon the street railway companies extra taxes to which there are no corresponding imposts upon other forms of corporation activity, or whether similar special methods of taxation should be extended so as to embrace all public-service corporations, I desire to emphasize the importance of the new law in respect to the distribution of the levies upon corporate excess, or franchise tax. Before 1898, the proceeds from this tax, aside from that credited to foreign stockholders, went to the cities and towns where the Massachusetts stockholders live. Since then the distribution has been in proportion to trackage —a distinct change in concept. The corporations are considered as units, and not the shareholders as individuals. Accordingly the revenue is scattered to the communities whose population and

industries have provided the fund from which it has been paid.

This change in the rule of distribution can hardly fail, it would seem, to result in the adoption of a similar rule for at least certain kinds of corporations engaged in other work than that of operating street railways. If the idea is sound in respect to street railways, it is difficult to see why it is not also sound if applied to steam railways, to electricity and gas companies, to manufacturing and trading companies. It is obvious, however, that the distribution of the tax on corporate excess without reference to the residence of stockholders will be by no means a simple problem. The choice of trackage as a standard for division between cities and towns was natural in the case of street railways, but if the entire tax upon corporate excess is to be distributed on a new plan, that plan should rest upon some more fundamental idea than trackage by itself implies.

Is there, then, any theory so inclusive that it may properly be used as a substitute for distribution according to the residence of shareholder? It seems that it may be deduced from the resolution adopted at the National Conference on Tax Reform in Buffalo. This resolution in part was as follows: "That this conference recommends to the states the recognition and enforcement of the principles of interstate comity in taxation. These principles require that the same property should not be taxed at the same time by two state jurisdictions, and to this end that, if the title deeds or other paper evidences of the ownership of property or of an interest in property are taxed, they shall be taxed at the situs of the property, and not elsewhere.

It will be observed that the idea of this resolution, which refers in part to the vexed and vexing matter of double taxation through the attempt of a state to tax the securities which its residents own in foreign corporations, is that the tax is due to the state in which the property is found. It is a refinement of this idea to say that, as between the cities and towns of a particular state, whatever taxes are paid by a corporation should go to that community in which its plan rests and its business is done. The corporation is the taxpayer; its taxable situs is where its business is carried on.

This would appear to be a workable theory on which might be based the distribution of the tax on the corporate excess of all Massachusetts corporations. Surely, the distribution of the receipts from the street railway companies by the rule of trackage conforms to it, since trackage must be regarded merely as a rough index of the location of the companies' physical property and fields of economic activity. Perhaps, too, it is possible to find similar indices of the distribution of the property and business of corporations engaged in some other kinds of enterprise, although such indices in most instances will present difficulties which trackage does not.

First, however, it would be necessary to determine in what unit of territory the business of a corporation or a class of corporations belongs. Steam railways, for example, should be regarded as industries whose field of exploitation is the entire state: no smaller territorial division could be chosen, since the business of such companies ramify in all directions. Consequently, the whole tax upon steam railway companies, if the suggested principle is to obtain, should be covered into the State treasury. This would mean no more than that the Massachusetts practice in regard to taxes on savings banks and mutual insurance companies had been extended to steam railways. Telegraph companies also would be held to operate in a statewide field.

Nearly every other form of corporate activity to which the general law applies, on the other hand, might reasonably be regarded as essentially local, and the tax on corporate excess could logically be divided among the cities and towns on the basis of somewhat arbitrary indices or of valuations of the physical property itself. Numerous companies are located in but one city or town, and there would be no problem in distribution with them. But for corporations whose enterprise crosses the lines of local demarcation, definite rules, varying with the different kinds

of business, would be needed. The number of instruments in each place might serve as an index with telephone companies, and the extent of wires and pipes might answer for electric and gas companies. Manufacturing and trading companies doing business in more than one city or town would present more complications, and indices probably would have to be abandoned, so far as they are concerned. Should the distribution be in proportion to the valuations of real estate and machinery which the tax commissioner uses in finding the corporate excess, it would hardly be contended that the allotment would not be essentially just.

No statistical investigation is necessary to show that purely residential communities would suffer a loss of revenue and that the centres of manufacturing and general business activity would gain in income, as a rule. Boston would be benefited through the large trading companies, stockholders in which live elsewhere in great part. Certain manufacturing cities, like Lawrence and Lowell, which are put to heavy expense for street improvement and for the provision of school facilities for populations composed of mill workers and others of moderate means, also would receive considerable additions to their incomes. On the other hand, many places probably would be but slightly affected one way or the other. The retention by the State of the entire tax upon steam railway and telegraph companies could hardly be a serious matter to any city or town, while the gain to the State treasury would be large and would correspondingly lessen the State tax on general property.

One important incidental effect would be to make the assessors in some of the mill cities less insistent upon high valuations on machinery, whose true value it is always difficult to determine, and the exemption of which from all taxation may yet seem the wise policy of the Commonwealth. The competition of Southern cotton mills with those of New England is one factor which has directed attention in Massachusetts to the taxation of machinery. In two cities of the Commonwealth, Holyoke and Lowell, vigorous protests against the valuation of such property fixed by the assessors have been made in the courts. As the law is to-day, and with municipal expenses as they are, these officials have every inducement to find high valuations for machinery, since the tax on the value of the stock issue of a corporation over and above the value of the real estate and machinery goes largely to non-resident stockholders.

The change as to corporate excess which the departure in reference to street railways seems to suggest as logical—and it should be said that this departure also implies a change in the distribution of the bank tax—may not take the form outlined above. It is possible, indeed, that the simplicity of distribution in proportion to population may commend that method to the public. It is possible again that the plan of the commission of 1897 for turning all receipts from corporate excess into the State treasury may yet seem the wiser course. But it is a warrantable contention that in disposing of this fund some consistent theory must be followed, and that the law as it now stands is, in respect to distribution, in a period of transition. Allotment on the basis of local holdings of shares has been given up in one field, but no substitute for that basis which is of general applicability has taken its place in the policy of the Legislature.

WORCESTER BOARD OF TRADE.

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The Worcester Board of Trade wants to keep on file at the Secretary's office a complete list of places where floor space can be secured for manufacturing and business purposes. There are calls made every day for such information. The Secretary would appreciate it if every owner of a building in Worcester used for manufacturing or mercantile business would furnish particulars of what he has for renting purposes, and if land-owners would also file a list of available building sites. State owner, location, whether store or factory, amount of floor space, amount of power available and approximate rental. If it is land for manufacturing purposes, state owner, location, number of square feet, general dimensions, any building thereon; if so, give floor space, number stories, brick or wood, power plant with horse power, and purposes last used. Also give name of railroad near it and side-track facilities. Give price that can be used as basis of negotiation.

This information is for the use of the Secretary, and is not to be used for any purpose except to locate new or present business interests. No compensation is to be asked for any lease or rental that may be brought about by the Board of Trade.

The regular meeting of the directors of the Board of Trade will occur Thursday, Sept. 14. This is the first since the summer vacation.

A number of Worcester exporters have received literature relative to the Floating Exposition planned by the Export Shipping Company of New York.

This company proposes to equip a large steamer and furnish space thereon to American manufacturers to make a display of their products and send them around the world on a 60,000-mile trip, to consume about fifteen months. In answer to numerous inquiries received by the Bureau of Manufactures at Washington the following explanation of the enterprise is offered:

The plan is to allow each person who subscribes for forty square feet of space, or more, to display his goods, and to send on the steamer a representative whose duty it will be to see that the exhibit is properly arranged at each port, to meet the merchants and dealers invited to inspect the exhibits, explain the utility and advantages of the goods, quote prices delivered in the country of consumption, terms under which goods are sold, appoint agents, extend the sale of the goods, ascertain what the markets of the country demand, the competition to be met, etc. This representative shall also satisfy himself by a personal investigation that any agent so appointed to represent his principal shall be of good character and financially able to meet his obligations. If the standing of agents is carefully gone into, there should be no objection to extending ordinary business credit, and no more risk in doing so than is experienced in granting time payments to domestic customers.

The undertaking is likely to create wide interest in the commercial world, and its progress will be watched keenly by the various trade journals and newspapers, so that every merchant in the countries visited will be familiar with the fact that the exposition is to call at his port. In these circumstances it will

not be a hard matter to induce him to visit the ship. The date of arrival in the ports will be advertised, and all interested will be advised to obtain tickets of admission at the newspaper offices, the Chamber of Commerce, the American Consulate, or at the office of the Export Shipping Company. It is also proposed to print, in the language of each country, a catalogue showing the name of each exhibitor, the name of his representative, the position of the display in the ship, and a full description of the goods exhibited. As in some instances it will not be possible to obtain direct land communication, it will be necessary to bring the visitors off in launches, which will also necessitate serving lunch on the steamer as well as insuring sufficient time for each visitor to examine thoroughly each and every exhibit on the ship. The luncheon should provide a most excellent opportunity for the demonstration of American food products.

All firms participating will be required to conform to reasonable rules, and the representatives on the ship will be afforded opportunity to acquire a knowledge of French, Spanish and German, and are expected to improve it. In this way such representatives will gain knowledge of trade conditions and the ability to answer letters, upon returning home, in the language of the inquiry. If in any cases sufficient sales are not consummated while on the trip to reimburse the participants for their expenditure, at least the seed will be sown in fertile ground, which will bear fruit in years to come. The plan will appeal particularly to firms who already have an export trade and agents in the different countries, as the agents would assuredly be flattered to receive a visit from the representative of the manufacturers, and the opportunity would afford a splendid chance for calling the attention of his customers and others interested to the display, and also allow him to explain on the spot what special facilities or changes in standard goods or manner of putting on sale will lead to an increase in business.

The expense of the trip is to be borne entirely by sale of space on a mutual basis. The available space is 20,000 square feet and the price is fixed at $50 per square foot. The prospectus of the promoters shows in detail the estimated expenses, and the surplus remaining at the termination of the trip is to be returned to those who participate pro rata. It is expected that the net cost of space will not exceed $35 per square foot of space, and $500 for meals and incidental expenses of the representative. This, on a basis of forty square feet of space, means that the entire cost for traveling expenses and showing samples will be about $5 a day.

The exhibits will be cared for and all necessary janitor service, lighting, and a limited amount of power for working exhibits will be furnished without extra expense. The promoters call attention to the fact that the enterprise is not designed as a money-making plan, but is intended to be a dignified, broad-minded plan to further the cause of America's export trade.

It is desired, and efforts are being made, to have the exposition representative of as many different lines of prominent American manufactures as possible or practicable, and to have the exhibits arranged in such a manner that the attention of interested merchants in foreign countries will be held and impressed thereby.

The itinerary provides for stops at ports of the most important commercial countries of the world. . .

POPULATION OF MASSACHUSETTS CITIES.

	1905	1900	1895	Gain in 10 Years	Per Cent of Gain in 10 Years
Worcester,	127,763	118,421	98,767	28,996	29.36
Cambridge,	97,426	91,886	81,643	15,783	19.33
Lowell,	*94,845	94,969	84,367	10,478	12.42
Lynn,	77.055	68,513	62,334	14,671	23.53
New Bedford,	74,321	62,442	55,251	19,070	34.52
Springfield,	73.484	62,059	51,552	21,962	42.63
Somerville,	69,188	61,643	52,200	16,988	32.54
Holyoke,	49.124	45,712	40.322	8,802	21.83
Newton,	36,694	33,587	27,590	9,104	33.00
Haverhill,	37,818	37,175	30,209	7,609	25.19
Fitchburg,	33,017	31,531	26,409	6,608	25.02
Taunton,	30,952	31,036	27,115	3,837	14.15
Quincy,	28,067	23,899	20,712	7,355	35.51
Worcester County,	301,844	346,958	306,445	55,399	18.08

* Loss.

THE WORCESTER MAGAZINE

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Magazine and Municipal Comment.
Representative Worcester Residences.
Citizens' Initiative in School Reforms.
Offer of Green Hill Estate.
Board of Trade Notes.

DEVOTED TO

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WORCESTER, MASSACHUSETTS,
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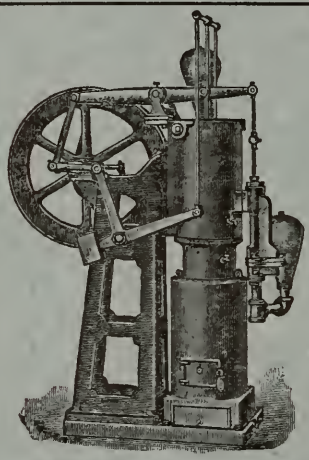

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RESIDENCE OF MR. EDMUND L. PARKER.

The Worcester Magazine.

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This magazine is published by the Worcester Board of Trade. Its reading pages are devoted solely to municipal development, good citizenship and the business welfare of Worcester. Space in these pages is not for sale.

MAGAZINE AND MUNICIPAL COMMENT.

Now for Business

The vacation season ends with Labor Day. People are now catching up in their work; the office buildings are filled with browned-faced lawyers and other professional men, and Worcester has settled down for the busy winter season. Unless all signs fail, this is to be a busy and prosperous year through the remaining months. The hand of prosperity points this way and is apparently a fixture. The crops have been good and the industries of the country generally seem to be getting ready for plenty of work. The railroads report their outlook of the best. Building operations are going on everywhere over the country, showing that the business of the land needs more space for its operations. The men who will make the biggest profits, for the next few months, are those who are the first in the field for the new business; the men who by brains in the conduct of their own business and by the constant advertisement of what they have to offer customers, gain the attention of the customers first, while the good feeling in business is still broadening out. In these days business is not to be had in any line, no matter how well established, by merely standing still, no matter how prosperous the country may be. The quiet of the vacation season has changed to the active rush of the autumn; and it is in the first period of the change that the most business, especially new business, is likely to be captured.

Growth of a Good Idea

Governor McLane and Senator Gallinger, with other New Hampshire officials, show renewed interest in the matter of establishing a national reserve in the Mt. Washington region. The recent purchase by Boston people of certain tracts in the section of the Presidential range, supposedly for the lumber interests, may have given a new impetus to the subject which is no longer a matter which concerns New Hampshire alone. It is a New England problem, since the prosperity of some of the largest manufacturing plants in Maine, New Hampshire and Massachusetts, especially those along the banks of the Androscoggin, Saco and Merrimack rivers, which rise in the White Mountains or are fed by White Mountain streams, are involved in the preservation of the timber growths in this natural watershed.

The argument the more frequently advanced why a national reservation should be established in the White

Mountains is the argument of sentiment, that this magnificent scenic display of nature must not be destroyed or made hideous through the greed of man in stripping the forests from the mountain sides and valleys. It is the argument that has caused the Yellowstone Park to be set aside and the Yosemite Valley region to be preserved.

This is but another movement in the direction of a great national park system. The states are acquiring their beauty spots—the bits of natural scenery—lake, ocean front, river and mountain—for the enjoyment of the people. The time is certain to come when Lake Quinsigamond will be a state park. The sentiment is drifting that way and the people will gladly welcome such a change.

Showing Strongly in Favor

The special committee to consider the establishment of trade schools in Massachusetts cities has Worcester in mind as one of the places for a hearing. Governor Douglas did a good thing when he had the Legislature start the inquiry into trade schools. The showing that has already been made before the special committee is strongly in favor of the Governor's idea.

The proof of the way these schools have worked in England, where the labor unions are even stronger than they are in this country, was just what was needed to prove the Governor's case. That there is need of trade schools in this State has been plain for some time. These schools do not bring the trades into an overcrowded state. And the unions themselves in England are beginning to admit that since the schools were started, the general grade of labor in organized trades is better, and is able to get better pay in consequence. The very fact that the trades unions abroad are backing these trade schools up and would not have them abolished, shows that such a school in Worcester would be a good thing.

Citizens in School Reforms

In another section of the Magazine is the discussion of educational progress by Dr. G. Stanley Hall, president of Clark University. "Citizens' Initiative as a Factor in Educational Progress," is the subject which Dr. Hall selected for his talk before the recently organized Public Education Association of Worcester. He is the first speaker to give advice to the association, although some pretty plain talk was given the prospective members during the organization process. Dr. Hall is an eminent authority on school matters, and everything he says on these lines attracts wide attention. He is a firm believer in a small school board or committee, being satisfied in his own mind that far more satisfactory results are obtained. He has watched the workings of individual school systems controlled by both large and small committees, and speaks his opinion in no uncertain terms. His advice to the newest of the educational associations is wise and it is for them to consider well. Work is what wins, is the keynote of his talk.

Isn't this a Step Backward

The New York Central Railroad Company has filed a petition with the Railroad Commissioners for a renewal of the permission given two years ago to heat some of its trains on the Boston & Albany system by stoves rather than by steam from the locomotives. In these days of up-to-date travel accommodations, it seems a bit antiquated to use stoves for car heating.

Several years ago as the result of a railroad wreck being set on fire by the demolishing of stoves in which fires were burning in some of the cars, legislation was enacted to provide that railroad trains should be heated by steam from the locomotives. One clause of this law enables the Railroad Commissioners to make exemptions in certain cases for periods of a few years. As it is not a perpetual exemption it compels the railroad companies enjoying the privilege to petition for a renewal from time to time and allows the board to ascertain if the conditions have been changed any.

Under the present petition the New York Central company wants to heat so-

called "mixed" trains on its Webster and Athol branches by stoves. Permission was given for two years in 1903, and this will expire the first of next month. The company now asks for a renewal for another two-year period. Mixed trains are those made up partly of freight and passenger cars, and on account of this it is not practicable to heat them with steam from the locomotives.

Wachusett Dam as a Power Plant

An idea has been suggested of using the big Wachusett dam as a power plant. The idea has been favorably commented upon throughout the State. It is claimed there is no engineering reason why this fall of about 100 feet of water may not run turbine motors enough to make Clinton a big industrial centre. The State, with a six-mile lake behind the dam, can be reasonably sure of having a permanent supply. To be sure, the volume of water that goes to the Metropolitan supply is not equal to the tremendous supply from Lake Erie, that goes tumbling over Niagara Falls. But the fall is about equal to that at Niagara, so that a generous force can be generated. The main argument in favor of the plan is that the income thus raised must go towards lessening the Metropolitan water debt and the annual assessments of cities and towns in the Metropolitan district. And the Metropolitan assessments in the next five or ten years must be heavy unless something of this kind should be done. An income from a big power plant at Wachusett ought to bring in more and more as the competition for New England water power gets keener.

The Index of Prosperity

The annual report of the Boston & Maine Railroad is always interesting because the road is in a considerable measure an index of the prosperity of New England. For the past two years the report of the earnings and operating expenses has made a good showing. The gross earnings of the company in 1904 are in larger proportion than in 1903, and the freight charges and dividend requirements have not materially increased. The showing of both ends is good.

The most significant feature of the report, however, is the proposed adoption of a general financial plan for the improvement of this great property. The Boston & Maine is one of those roads which has realized that its increased business necessitates an increased equipment and that money must be put into the system if money is to be taken out of it. The proposition of the directors is to issue treasury stock which will provide sufficient funds to pay for the improvements contemplated. Five million dollars of the new capital, it is stated, is to go into freight equipment, and about $3,700,000 more will be spent on improvements in other directions.

It is gratifying to observe that the Boston & Maine proposes to keep up with the procession. It is not only, as has been stated, an index of the prosperity of Maine, New Hampshire, Vermont and Massachusetts, but it contributes in no small degree to the prosperity of those states, and their interests are identical.

Food Cheaper in Worcester

The high cost of living in New England, compared with European countries, has always been a generally acknowledged condition. This is not true, and so far as food-stuffs are concerned one can live cheaper in Worcester than in the larger cities in Germany. This statement is based on a long and interesting report on the cost of living in Germany made to the State Department by Consul Harris at Chemnitz.

Mr. Harris compares the prices of foods in America and those in the empire, and it can be very readily seen that they are much higher in Germany. In regard to meats, the consul states that the question of cheap meat for the poor classes is beginning to agitate the empire and, as was to have been expected, the tariff laws enacted in favor of the landed proprietors have not produced the desired effect. Germany produced about seventy-five per cent. of her own food-stuffs. It was claimed that the re-

maining twenty-five per cent. could also be produced by a better system of intensive farming, if somewhat facilitated by a tariff which would protect the home meat and grain markets. Consul Harris calls attention to the fact that the importations of all kinds of meats from the United States fell off in 1904.

Blame the Trolley Lines

The increase in population in Massachusetts is satisfactory, showing a gain of about 3,000,000 in ten years. In some of the cities the growth in the past five years is disappointing in comparison with the period from 1890 to 1900. Worcester is not satisfied with the result, but the figures will have to stand. The Worcester public is satisfied that the city has at least 130,000 population.

In most of the large cities the increase has been below the last percentage of gain. In tabular form the showing is—

	Increase, p.c.	
	1900-5.	1895-1900.
Springfield,	18.2	20.4
Worcester,	8.9	19.9
Fitchburg,	4.5	19.4
Quincy,	17.4	15.4
Newton,	9.2	21.7
New Bedford,	19.0	13.0
Haverhill,	1.7	23.1
Lynn,	12.4	9.9
Chicopee,	2.6	16.7
Holyoke,	7.4	13.4
Northampton,	4.2	11.3
Pittsfield,	14.8	6.4

while in Lowell, Gloucester and North Adams the returns show an actual loss in population. Of course those who do not look any further than the printed figures will feel disappointed.

Blame the trolley lines for some of this difference. The electric car has made it possible for a man to work in the city and live outside. Better train service, too, is working along the same line. Of the million of people to be found in Boston daily, how many live in that city? The great majority, to be sure. But the load of the outgoing trains from every station and the packed masses on the "L" trains that connect with out-of-town branches, tell their own story. Before any Massachusetts man gets ready to sit down to tears over the loss in population, or the pernicious effects of trust consolidations, or the evils of the protective tariff, or whatever else may be the reason given for the shift in population, let us study the full returns from the suburban towns, along the fringe of these cities and see what good gains they show over the figures of 1900.

Student is the Gainer

Ocean liners which reached port during the last two weeks in August, contained so many teachers in the list of homecoming passengers that the fact was commented upon. It is significant of the changed condition in teaching and the relative betterment of the lot of the devotees of that profession which, it is sometimes felt, has done the least in improving the position of those who follow it.

They who teach are notoriously ill paid; but every summer scores of them are able to cross the ocean, and in most cases they have to practice petty economies that would be trying to the ordinary tourist. They are fitted to travel with an understanding that means intellectual, and hence the highest, pleasure, and that lends to the experience—by its direct bearing on their life-work—a zest that few who spend more thoughtlessly can know.

The going to Europe of the teachers means, however, much more than the pleasure and profit of the travelers themselves. That pleasure and that profit, brought back by them in concentrated form and reflected in their physical vigor and mental breadth and stimulation, are passed on to the wide circle of their pupils. If twenty Worcester teachers should go abroad for the summer vacation, not less than 2000 students, young and old, would be the gainers. The result is large enough to make it of significance to our educational system.

The figure given out by the Government Bureau of Statistics in the Com-

Build them in Worcester

merce and Labor Department, shows that more than $1,000,000 worth of automobiles and parts of automobiles were imported into the United States from France, Germany, England, Italy, Ireland, Switzerland and Cuba.

The first record of the importation of foreign-built automobiles into the United States was in 1901, when twenty-six automobiles, valued at $43,126, were imported into the country. Since that year, however, the imports have steadily increased, having grown from twenty-six in 1901 to 423 in 1904, while their value (including automobile parts) has increased from $47,471 in 1901 to $1,446,303 in the last fiscal year.

Worcester is the world's centre of metal goods. Every part of an automobile is made here and yet there is not an automobile plant here. A person can purchase the parts in Worcester machine shops and do his own assembling. There does not seem to be any good reason why, in addition to the great wealth of machine industries, the automobile business could not be taken on.

Six years ago American manufacturers made but forty-five automobiles, valued at $60,000. Last year they built 26,601 machines, valued at $40,000,000, and in two years from now the value of the output will probably exceed $100,000,000. The export trade is increasing rapidly and is already assuming large proportions.

Keep State to the Front

While making his plea for trade schools, in his inaugural message, Governor Douglas said: "No effort should be spared to keep Massachusetts to the front in the industrial world. Since the practical abolition of the apprentice system and the specialization of labor in most of our mills and factories, there is very little opportunity for learning a trade. The apprentice system is indeed very much abridged. It is frowned upon in most of the trades, though we still have laws governing indentures and fixing the responsibilities of masters and those bound to them for certain periods. Yet that system was once about the only road to industrial recognition and advancement as it is the logical one probably, even at the present time.

"There are those still living who can easily remember when the apprentice system was the rule and not the exception, and probably it would have continued up to the present time had it not been for the objections of the labor organizations. Its gradual decline into desuetude was the cause at one time of inferior work in all the trades. As it began to go out there was nothing immediately at hand to take its place. Thoroughness was the distinction of the old system."

The Deane Steam Pump Company of Holyoke has decided to go back to the apprentice system in part for the employment of its help. It has formulated its terms, including the apprentice agreement and some five or six have signed their papers. Only those who have reached the age of seventeen years are taken. They agree to work well and faithfully under the shop rules and regulations for the term of 12,000 hours, beginning with the acceptance of the agreement, in such capacity and in such work as their employers shall direct and at such times and in such places.

Each apprentice who has faithfully and satisfactorily completed his term of instruction shall be entitled to a bonus of a hundred dollars at its conclusion, which is offered as an inducement to fully and satisfactorily complete contracts.

Educate for the Industrial Life

"It is unskilled labor which is out of work," is a remark made some time ago by Rev. Dr. Eldridge Mix, City Missionary Society superintendent. He says: "Educate the people for the sake of the industrial life of the city." Dr. Mix, in his capacity of city missionary, has a chance to get at the heart of things and know the life of the immigrant in Worcester. He would have the school houses of Worcester opened for the instruction of these unskilled laborers, giving them an opportunity to get the learning which will help them to become skilled laborers and able to do for them-

selves. The skilled laborers can look after themselves while they are able to work. When they are out of work for any reason, their trades unions are there to watch out for their interest, and if the unions live up to their claims, their members have something on which to fall back in times of trouble.

But the unskilled laborer has nothing of the sort. He is in the most precarious condition of any of the workers. The demand for his services is the most fitful and unreliable of any of the demands of the industrial world, and when he has no work he has nothing but the city to look to for his living.

It seems to Dr. Mix and the people who have studied the question that it is a move in the interest of good business to educate the unskilled men and make them skilled, and therefore able to watch out for themselves.

Great Opportunity for a Park

The proposed purchase of Green Hill farm for a public park is now fairly before the City Council. Aside from the sentiment of owning the country estate of Hon. Andrew H. Green, "Father of Greater New York," the price of this property is really the important factor. At a nominal figure, which can be materially reduced by disposal of certain tracts of land, Worcester can own one of the largest parks in New England. Springfield has as one of its chief assets Forest Park, a beautiful tract of land, which is visited by almost every person who goes to that city from Worcester, and yet that great area is many acres smaller than Green Hill farm. The latter is nearly 100 acres larger than the famous Roger Williams Park, Providence, and it is far more developed than any of them. It is, without question, the most sightly and beautiful spot in all New England. The net cost to the city will be $54,900, and under the conditions of the offer the city can at any time dispose of a tract amounting to 100 acres. The only binding condition under the terms of the offer is that it shall be called Green Hill Park, and forever remain a part of the Worcester public parks system. The cost of this tract of land as compared with the great price of other Worcester parks is exceptionally low. Elm Park and Newton Hill cost $62,000; East Park cost $50,000; North Park cost $36,000; Crompton Park cost $60,000, and University Park cost $86,000. Worcester has expended for these parks, aggregating nearly 224 acres, $294,000, and has had the expenses of development. Here is a park fully developed, situated in a most ideal spot, containing a variety of scenery and advantages, and more than twice as large as the above-named parks combined. It can be had for a little more than $50,000, and a privilege of getting that back in the sale of a portion of it.

Most Widely Known Citizen

A few years ago, in a party of a dozen or more representative business men, the question was asked who was the most widely known man in Worcester. Almost every one had his individual answer. Senator Hoar was named by the majority, but one of those present suggested the name of Mr. Seth Richards. It was argued that he had been a teacher of music in the public schools for a quarter of a century, and that consequently every person who had attended the schools had met him personally, and many knew him intimately. Naturally the pupils of Worcester schools for a consecutive period of twenty-five years comprised the larger percentage of Worcester's population.

Mr. Richards' recent death removes from Worcester one of its best known citizens. Any man long identified with the public schools, bringing him in daily touch with the teaching force and the pupils, must of necessity command the respect, friendship and devotion of many thousands of boys and girls, men and women. Since retiring from his school work Mr. Richards has been a prominent Main Street business man, and among business associates had many friends. In the business world and in the circle of music-loving people his death is regretted, but it is the thousands and thousands of pupils of the schools who were in closest touch with him during these years who will miss his genial face, his kindly, whole-souled greeting.

RESIDENCE OF MR. EDMUND L. PARKER.

OCCUPYING one of the few ideal locations in Worcester, the residence of Mr. Edmund L. Parker, situated on the corner of Massachusetts Avenue and Drury Lane, justly attracts and merits the attention and favorable comments of the lovers of the beautiful. Few sites can compare in natural beauty with this one, approached by our only distinct avenue, with its double drive enclosing a line of stately trees and embellished with choice shrubbery.

But the crowning glory of the locality lies in its fine oak grove, offering, perhaps, the only existing example of the original forest, covering so large an area, within the city limits. Looking from the drawing-room the view embraces the best part of this grand and stately grove, also showing the Oak Path winding through and into the depths of green and shadow.

In considering the style and type of building for such environments, the owner and architect had but to observe the natural beauties of the location to feel that only such design and material as would tie the house naturally and simply to nature, would fitly fill the requirements, hence a home embracing in itself the sturdy character of stonework, suggested by the large boulders lining the Oak Path, the open timber work above and all surrounded by a red slate roof, broken by gables in plaster and many massive chimneys, all trending toward that rugged and substantial character required by the setting of the house.

As shown in the accompanying cut, the first story of the house is laid in a bold and rough manner, of very large field stones, with necessary trim, etc., in New Hampshire granite. This story is surmounted by heavy open timbered work, with plastered panels, also shingles in certain parts, the design of gables and timber work generally being very happily carried out.

The color scheme of the exterior, embracing the soft grey of stonework, the dark, rich, greenish cast of timber, and yellowish green of plaster panels, with the red slate roof and chimneys, give a remarkably pleasing effect. Notable features of the exterior are the entrance porch and side veranda, in heavy timbered effect with carved verges, red tile floors, stone seats, etc., the main entrance porch being particularly successful in artistic merit.

Opening from the porch one enters the spacious reception hall, embracing beautiful stairway, ingle nook, with seats and fireplace, etc. The hall is sub-divided by graceful columns and arches, and the effect is enhanced by paneled dado, ceiling beams, and a long, low stretch of leaded glass windows. The color scheme of the hall is white paint and soft colonial yellow walls. Opening from the reception hall on the right is the drawing-room, extending the full depth of the house, facing the grove. The opportunity of the beautiful view of the grove has been utilized by the large circular bay, occupying two-thirds of this side of the large room, giving large glass area, the upper portion of which is in handsome leaded effect. The room is finished in mahogany, with fine mantel and fireplace, also special treatment of the ceiling in wood and plaster. Opening from this room is a spacious alcove with leaded glass windows, etc.

The large veranda opens directly from this room by French windows. The tone of the room is in green. Opening from the left of the reception hall is the dining-room, finished in quartered white oak, stained to a darker tone. The room has a high paneled dado surmounted by a plate rail, with heavy wood cornice and ceiling beams. Opening from the dining-room is a spacious alcove with seat. The fireplace is of decorative tile, and fine columnar mantel, flanked by an ornate china cabinet, fills one side of the room, and forms a striking effect as seen

from the hall. The transom sash are glazed in richly colored leaded glass, the whole effect of the room combining strong coloring and rich effect in woodwork. The balance of first floor is given up to service department, lavatories, coat closets, etc.

The second floor is reached by an easy ascent of main stairway, lighted on the landing by a finely colored leaded window, below which is a long, comfortable reach of seat. Opening from second story hall is the family sleeping-room, over the drawing-room, occupying the full end of the house, with fireplace, seats, wide window stools, etc., and from which opens a roomy dressing-room with large, well lighted and equipped closets; also a large balcony opens from this room by glazed doors. Adjoining is a large tiled bath-room, fitted with modern fixtures, linen and medicine closets. A finely located sitting-room occupies a portion of the second floor, giving views of the grove, also of Salisbury Pond and Institute Park.

The remainder of this floor is given up to airy sleeping-rooms, with baths and lavatories attached, all equipped in the best manner. A cozy corner or smoking room is located in the octagonal bay on the front, fitted with fireplace, seat, gun closet, etc., and from which a commanding view of Massachusetts Avenue is obtained.

The third story of the main house is finished into a billiard and card-room, both very spacious, furnished with brick mantel and fireplace, seats, etc. The room is panelled up in novel design, the ceiling being heavily beamed, and decorations of suitable scenes in general sporting lines. Opening from the card-room are a lavatory, closets, etc. The balance of third story, in the rear, is devoted to service department requirements.

The building is heated by the new system of vapor heating, and fitted for electricity, and all modern equipments.

"We are a great people, and a well-governed people. Well housed, well fed, well clothed, with an open schoolhouse and a free altar, on this earth there is no nation where the skies are bluer and the grass greener, the people more contented or with a brighter future than in the United States of America in this very year of grace. The people are free; the ballot is in their hands, and they are the government. It is true that the material prosperity of our country has marvelously increased during our life-time. In this prosperity all have shared. We have better houses, better furniture, better food, better schools and colleges and libraries and churches, better roads and parks, and more of them; better hospitals and asylums, better public buildings of every description. Never was wealth held with a more generous hand. The claims of humanity are acknowledged. Never were the poor and needy better watched over and cared for than to-day. Never did the child born into the world have a better opportunity for health, growth, education, comfort and culture. Never did the law reign more supremely or more benignly. Never before could a president of the United States suggest peace to belligerent nations."—From speech of M. Alfred Hemenway of Boston.

CITIZENS' INITIATIVE IN SCHOOL REFORMS.

The most convincing argument in favor of a small school committee is from Dr. G. Stanley Hall, president of Clark University. The facts set forth by this prominent educator are well worthy of careful reading and consideration. He gave them to the Worcester Public Educational Association soon after its organization, the subject being, "Citizens' Initiative as a Factor in Educational Progress."

WHILE improvements in school systems may be begun at many points, the greatest need, as well as the chief leverage, is to begin with the school boards. The last twelve or fifteen years have witnessed a new movement in this country to reduce their size. To select twenty representative cities, the following have nine members on the board: Springfield, Los Angeles, Duluth, Baltimore. The following have seven: St. Paul, Cleveland, Memphis and Washington. Kansas City and Denver have six each. Five are found in Buffalo, Toledo, Rochester, Indianapolis, Minneapolis, New Haven and now Boston. San Francisco has four, while Albany and all the cities of the second class in the State of New York have only three.

Of these twenty, I have visited all but four since their reform, and have been impressed both with their general excellence, for no other twenty could be selected that are on the whole so good, and with the uniform testimony to great improvement due to reconstruction. My correspondents in these twenty cities assure me that no breath of scandal has arisen under the new system, and I am told that there is no system in the country that has enlarged its board within a decade. This movement is spreading rapidly, and has already reached several score more cities besides the above, while similar changes are under discussion in many, if not most, cities that retain the old system. Worcester's board of twenty-four is already among the largest in the country for the size of the town.

Without exception, so far as I know, the reform has been initiated from outside the school system. It is generally a citizens' movement, and has usually been adopted only after a vigorous struggle with the representatives of the old order. Everywhere there have been the same objections, and everywhere the same triumphant answers to them.

The reduction in the size of the board is called anti-democratic, and the idea of many honest, well-meaning citizens is that a large board is more like the old-fashioned town meeting, and to concentrate so much authority in a very few hands seems at first a risky step. The answer to this argument which is overwhelming, is that if only representative men could discuss and settle all school questions in public, the larger the body the better, but large boards everywhere break up into small committees. Boston had twenty-nine; Worcester has eleven; Philadelphia had thirty-seven. No superintendent, no citizen, and even no reporter, can attend all these meetings, so they are usually in effect secret. And yet in them all important business is arranged, questions settled, plans matured; all trades and adjustments are predetermined.

Hence, it comes that in the general meetings there is little to do but to take and record votes (I know one single meeting in which over seventy votes were passed, after which a member told me that he knew the merits of only four questions, as that was all his committee contributed), and to talk for the benefit of the press, the constituents and the public generally; so that the true motives of measures are rarely apparent. In view of the vast sums of money expended annually for buildings, textbooks, etc., and the ease with which jobbery and even corruption can be covered and individual responsibility evaded, there is constant temptation to crooked-

ness. Thus the large board in its actual operations is anti-democratic, and its real operations tend to become of the star chamber order.

Moreover, politics always tends to creep in. There is a general consensus that the last few decades have witnessed a general deterioration in the quality of members of the American school boards. More of them are unknown to the voters outside their own ward. It is the first step toward a political career, and these little committees are particularly prone to patch and hack at old rules and multiply new ones, so that now the body of enactments governing many of our city schools under the old system, instead of being plain and simple, sometimes comprises from one to three hundred pages of printed matter, and presents ambiguities if not inconsistencies hard for a lawyer to master. Under the new system, committees entirely cease and everything goes before the full board, or there are a very few committees, where everything is open. Thus it is really the old system that is radically and essentially anti-democratic.

Again, it is objected that all parties and creeds should have proportionate representation, and that the new boards fail to secure this. This argument has great weight with partisans and religionists, but it is, if possible, more shallow and absurd than the other, for many of these new small boards by distinct enactment must consist of representatives of each leading party and creed. San Francisco, with its board of four, specifies that only two shall be of any one party; New Haven, with its board of seven, specifies that not over four shall belong to the same party; and elsewhere provision is made for securing proportionate representation of Protestants and Catholics. For myself, I would go still farther, and welcome the best men, whatever their convictions. I am a Protestant and a Republican, but I would prefer to send my children to a school where all the board were Catholics or Democrats, or both, if they were the best members of these persuasions, than where they were all of my own creed and politics but the worst, or even the average. Many cities have risen above these questions, and are content with the best men.

Effective as a reduction in size has everywhere proven, it is not enough. The superintendent must be given more power in purely educational matters. Education is now a profession, represented by chairs in most universities and by numerous and very expensive normal schools and colleges. The superintendent should be recognized as an expert, and instead of having all his duties minutely defined and prescribed, he should be free to use all his knowledge and ability for the good of the community. To do this he must control first the appointment and removal of teachers. It is hard for the great public to learn the vast difference between good and poor teachers, or to understand how the quality of the teaching corps tends to distinctly deteriorate when this initiative is in the hands of the board. A generation ago the boards examined even graduating classes at normal schools, and gave or withheld diplomas accordingly. The best teachers were selected for home consumption, and not the worst. I know there have been superintendents who illustrate the adage, "He who depends, defends," and have upheld a usage which took from them all responsibility of appointment. It is superintendents from these new cities that have this power that are now choosing and taking away the best teachers from the schools under the old system, where it is far easier to drop a good teacher who depends upon merit for his or her place, than a poor one who cultivates "pull." Those who are inwardly conscious of their own weakness often devote themselves to cultivating influence, until it becomes almost an impossibility to drop the worst, while the best are ever harder to keep. No wonder the best superintendents gravitate to cities where they can choose their own teachers, selecting the best wherever they are to be found.

Again the superintendent should determine not only the courses of study but the text-books. There are vast differences between good and bad ones. Some are expressly made according to an elaborate recipe designed to make

them sell to the ignorant, and sometimes venial text-book committees. Moreover, there is an innate contradiction in giving the superintendent the power to arrange the course of study and withholding the power of selecting all text-books. In some subjects the worst text can be had beyond the power of description, while others open up topics easily and naturally, and make for mental economy and progress up to the grades, and bring out all the powers of the teacher and the pupil.

To this end the superintendent should be selected with great care, for here, too, quality differs vastly; should be given a generous term, and also freed from the duty of educating new members of the board each year, attending committee meetings, sitting on the anxious seat, and feeling himself essentially a servant liable at least annually to be discharged with or without cause.

A third reform, which has often—not always—gone with the preceding, but always should, is the separation of the business from the professional management of the schools. The erection of buildings, all changes in them, or grounds, the purchase of supplies, etc., should be in the hands of a trained business man, who should be on terms of friendly co-operation with the superintendent, but accountable to the board. Various devices have been adopted to secure the management of school business upon the same principles as are recognized in private business. I have visited various cities where, within a decade or less, a judicious system of locations for new buildings, a sensible plan of their construction, a great improvement on preceding schemes, has also resulted in very great economy. Sometimes where members of the board undertake this work, they receive a salary. This has given rise to the objection that the new system is expensive. The contrary, however, is the case. The city of Rochester, which has now an admirable system, actually turned back into the treasury the first year after the new scheme went into operation, $81,000. While such a per cent. of saving is exceptional, increased economy is the rule. Even in those cases where the budget is not reduced, far better service of every kind is obtained for the money. And this is true economy. It is precisely here that, in some cities, the rub has come, for this involves the abolition of favoritism, jobbery and pulls in all the matters involving contracts for material and labor, and secures the holding of each contractor and workman to his work by daily and detailed supervision. The difference between the methods of constructing schools and constructing dwellings and business houses by those who own and occupy them is great.

Another reform that has often been found very helpful is a special election for the school board; sometimes a separate day, and sometimes only another polling place nearby, or perhaps in the same room but under independent control. This factor seems to work well, but has hardly been tried sufficiently yet to reveal all its possibilities. Every degree of separation in space or in time tends to divorce education from politics and bring to the polls those most interested in school matters. In some communities women are allowed to vote for school officers, and so far this seems to have worked well. A separate election, however, such as now prevails in Indianapolis, Colorado, and elsewhere, is at least a promising experiment.

Closely connected with this is the separation of the school board from the city government. Where educational matters are controlled by one body and the financial support of schools by another, all kinds of friction and even abuse creep in; as in a large city recently where school supplies were diverted by the council, and instead of shortening the school year, as has sometimes been done, children were massed sixty in a room and many teachers released early in the year in order to avoid a deficit.

Now, no one of these improvements is sufficient of itself to insure real effectiveness, for great is the influence of lust of office and power, and often of spoils. There is no more clear and certain lesson from the whole history of education than that it always and everywhere tends by an iron law to degenerate in quality. I cannot think of a

single great reform that has ever been effected where the initiative and the carrying out of it sprang from within the system itself. The great reformers have for the most part been philanthropists, patriots, or at any rate not plain teachers by profession.

Thus such a function as your body seeks to exercise is essential. There are American cities to-day in which the woman's clubs have abandoned every other function except that of improving the public schools, and in some cases they have effected very great and beneficent changes—introduced the kindergarten; broadened the scope of manual and industrial training; improved the grounds; decorated the walls of the school rooms with works of art, sometimes quite costly; secured the nomination of good men or women on the board; improved hygienic arrangements; aroused public sentiment; rallied and organized the parents to meet weekly or monthly in every school building; improved evening schools; introduced nature study, etc.

These methods are all in the direction of simplification and increased directness. Everything is open to the public and to the press. It is the introduction of plain business commonsense, and wherever introduced, has behind it the intelligence of the community, arouses local pride and new public interest in the school. It is supported by every argument that is slowly working out municipal reforms in cities like St. Louis, Chicago and Philadelphia. It always brings excellent, if not the very best, talent and experience in the community into the service of the schools, and is certain to prevail just as soon as parents understand their own interests and those of their children.

Finally, the best answer to the question, what your society can do, is found in the statement of what other societies have done. Some of them have committees on the work of similar societies elsewhere, to bring before the members promptly knowledge of every new departure. Perhaps they send delegates to visit these societies and attend their meetings and return and report. Some of them have central meetings with delegates from other similar societies to compare notes. It is certainly surprising what has been accomplished in Brookline, Brooklyn, Philadelphia, and elsewhere. Again, lecture committees provide courses each season, sometimes by specialists in education and science, art, etc., and sometimes lectures for school children with the stereopticon. Others have committees on the relations of the work of the society to the community, whose duty it is to interest the press and supply them with information, and canvass for membership. Others have playground committees that consider the needs of municipal gymnasia, improve, enlarge or extend facilities for playing in the school grounds, on roofs, erect sheds for gymnastics in bad weather, etc. Art committees do several different things in different places. They collect pictures, photographs, mount and group them, cutting from weeklies, monthlies, which they advertise for, and arrange them so as to illustrate themes in history, art, nature study, literature, biography, geology, botany, etc. Sometimes these portfolios are circulated in the children's reading room of the library, and teachers can indicate the class of pictures they desire. I have seen one school that, as a result of some years of work by teachers and friends, had, I should say, six or eight thousand pictures, arranged to supplement the work of the school. Again, art committees solicit subscriptions for pictures, photographs, prints, drawings, statuary for the school rooms. Even loan exhibitions have been conducted by these committees for the benefit of the schools, and perhaps in the high school hall a permanent museum of industrial art or children's productions on paper and wood, etc., has been established in at least one city. History committees devise means for interesting both parents and pupils in local history, and perhaps print pamphlets outlining the history of the town and its vicinity, and suggesting historic excursions, collecting slides, and sometimes even new material has been gathered, old sites marked, literature listed. This has stimulated local pride. Science committees suggest topics, often of local interest,—

water sheds, native flowers, birds, trees, animals; study the telephone, fire, electric car service, ventilation, hygiene or astronomy; print charts of local objects of scientific interest; collect scientific toys, pictures; conduct popular lectures with experiments; have occasionally contributed apparatus. Physical and manual training committees have investigated conditions in school rooms, interested physicians to gather data, made recommendations for hygienic improvements, made reports on the state of athletics, brought experts to lecture on manual training, gathered educational suggestions for such courses from the people and the industries of the town, etc. Other committees have devoted themselves to the study and help of boys' clubs, and perhaps started new ones, assisting them in the way of procuring quarters and in useful expenditures of their energies in debate, etc. Mothers' meetings have been arranged in the school room where teachers and others were present, and practical topics like children's dress, lunches, home duties, toilet, health, were discussed. Occasionally special studies of children have been instigated by these committees.

I find there have been committees or lectures or courses under their auspices on the reading of children, home study, recreation, music, the relations to the public library, story-telling, the flora and the fauna of the region, etc. The object throughout is to bring the parents and the school and teachers nearer together, to create intelligent interest in the welfare of the school, to inform the public as to present theories and practices, and thus create a sound public opinion. Social meetings are often held. The essential feature always of these associations is work, which is largely done by standing committees continued from year to year for specific ends.

If this society is to accomplish results, it seems to me it should address itself to a definite program of work, with definite goals. Merely to edify and instruct each other, or even to inform the community is well, but I think the program of all other societies of this kind, that I know, is more definite and involves much more work. But it must not be forgotten that your work is just beginning. Your ends and purposes are the best things in the field of public education that have come to this city since my residence here. May you have the wisdom and energy in the face of the great work before you, so sorely needed here, to push on to complete success.

"The public school will continue to improve, school buildings to multiply, equipment to increase, salaries to rise, securing thereby more thoroughly trained teachers, and more perfect provision made for those whose education must end early in life."—Dr. Samuel B. McCormick, at Pittsburg Chamber of Commerce banquet.

THE OFFER OF GREEN HILL ESTATE.

THE question whether Worcester wants, in common with other cities, to materially add to its park system by the acquisition of Green Hill farm, is now before the City Council. The heirs of Hon. Andrew Haswell Green, "Father of Greater New York," have made a formal offer to the city of the property at a price and under such conditions which practically amount to a gift to the city. The tract of land contains 500 acres and the net price set upon it is $54,900. The Park Commissioners are given the privilege at any time to dispose of 100 acres. At a fair market value the income from such a trade would be a liberal contribution to the purchase money. The city has until November 10th to consider the proposition and make a decision.

The heirs of Hon. Andrew H. Green are Samuel M. Green of Holyoke, William O. Green and Mary P. Green of Chicago, and Nathan W. Green and Lucy M. Green of Worcester.

The estate comprises a tract of about 500 acres of land. Its southerly extremity touches Belmont Street, opposite the Chandler hill section of East Park. Thence it runs northerly at a short distance from and parallel to Lincoln Street until at a point nearly opposite North Park, it abuts on Lincoln Street for about 1300 feet. The southwestern side of the land is reached at one point by Hermitage Lane, at another by Channing Street, five or six minutes' walk from the terminus of the Grant Square cars. Its western side is reached by Green Lane, about five minutes' walk from Lincoln Street; by Washington Avenue, and by Brittan Lane from Brittan Square. Its north end not only touches Lincoln Street but is also reached by several private streets from Lincoln Street at other points. Its easterly side overlooks and bounds Lake Quinsigamond valley. Its southeast side bounds on land owned by the Worcester Insane Hospital.

The eastern part of the land is a hill known as Millstone Hill, having an elevation of 760 feet, half of which is wild land and the rest heavily wooded. On the west is another hill, one of the highest elevations in the city, having at its top a reservoir for the water supply of the buildings. About in the centre of the estate and between these hills is Green Hill Pond, a body of water covering twenty-five or thirty acres and fed almost entirely by springs. This pond is the headwaters of Hermitage Brook, which flows through a part of the estate. It is stocked with carp. Its elevation is about 650 feet.

The mansion house stands in the southwesterly part of the tract. About it are trees of many and rare varieties, shrubs, lawns, gardens, and whatever makes a gentleman's country place attractive. Some of the boulders and the trees have interesting associations or were the gifts of widely known people to Mr. Green.

During the fifty years and more of Mr. Green's ownership, he constantly sought to develop and beautify the estate and now practically no additions or improvements are necessary.

This tract is one of the old estates in Worcester. It is first mentioned in the records of the proprietors of the township of Worcester, in 1733, and soon after came into the possession of the Green family, which has since owned and occupied it.

The offer of the heirs is contained in the following paragraph:

The present owners feel that it would accord with Mr. Green's wishes if this estate should become part of the public grounds of Worcester, and it would be gratifying to them if the name by which it has so long been known, should be retained.

For these reasons, the present owners hereby offer the estate of Green Hill to the city of Worcester for park purposes for its assessed valuation, which is

$104,900, upon the following conditions:

That the park be forever known as Green Hill Park.

That if, in the use and development of said tract, the Park Commissioners shall determine that any portion or portions of said tract are not desirable for park purposes, the city of Worcester may sell from time to time such portion or portions as may be adjudged by the Park Commissioners of the city of Worcester to be undesirable as aforesaid, but in no event shall less than 400 acres, including the site of the mansion house, be forever preserved for park purposes; the proceeds of such sale to be devoted wholly to the park purposes of the city of Worcester.

Should any of these conditions be violated, the estate shall revert to the present owners or their heirs.

If this offer is accepted, the said five owners will contribute the sum of $10,000 each, $50,000 in all, toward the purchase price.

The Park Commissioners recommend the purchase of the tract in the following communication to the City Council:

To the Honorable City Council of the City of Worcester.

The Park Commissioners herewith transmit to your honorable body a communication dated Aug. 10, 1905, from Samuel M. Green, William O. Green, Mary P. Green, Nathan W. Green and Lucy M. Green, heirs of the late Andrew H. Green, addressed to his Honor the Mayor of Worcester, and containing an offer to the city of Worcester, under certain terms and conditions, of the estate known as Green Hill, and now owned by them, for a public park.

His Honor the Mayor in a letter dated Aug. 14, 1905, which accompanies this report, referred the subject of this communication to the Park Commissioners, with the request that they consider the offer made therein and report their conclusions to the City Council.

In accordance with the request of the Mayor, the Park Commissioners have given the matter the serious attention and deliberation which it merits, and have considered, first, is the possession of another park of large area desirable in addition to the many smaller parks owned by the city; second, if so, does the Green Hill estate meet the requirements of such a park, and, third, is the purchase of the Green Hill estate advisable, under the terms and conditions imposed by the owners.

There are two objects sought in the ownership and use of public parks; the first of these is to supply the different sections of the city with breathing places in which the young may enjoy the advantages of athletic sports, and to which all, young and old, may resort for rest, recreation and amusement. This object is admirably met in Worcester by the parks of moderate size scattered throughout the city, which, with one or two additional parks of small area to serve as playgrounds, will supply the needs of an increased population for many years to come.

The second object and purpose of a public park is to bring to the denizen of the city an epitome of the country; in which walks may be measured by miles and reach sequestered nooks of woodland, or reveal rural landscapes secluded from the discord of human habitation.

The first essential of such a park is sufficient area, where one may seek and find the seclusion of woods and fields and, like Gibbon, "withdraw without reluctance from the noisy and extensive scene of crowds without company, and dissipation without pleasure;" where removed from the haunts of men its frequenter may revel amid the restorative charms of nature, interpreting her various language and holding communion with her invisible forms.

A park of this character is more and more becoming recognized as an urgent necessity to the modern city. Boston, in addition to over 2600 acres of public parks, has its large Metropolitan reservation of about 10,000 acres; Lynn, beside its smaller parks, has its "Lynn Woods" of 1000 acres, making an aggregate of over 2400 acres. Hartford possesses over 1200 acres, exclusive of the extensive Keney Park and the Colt es-

tate to be devoted to park purposes. Our neighbor, Springfield, has its Forest Park of 463 acres; Providence its Roger Williams Park of 427 acres. New York, Washington, Philadelphia, St. Louis, Chicago, Minneapolis, Baltimore, Newark and many other progressive cities, in addition to an extensive acreage, have secured at least one tract of sufficient area to serve the second purpose of a park. Many cities of Europe possess extensive forest parks originally reserved for the amusement of kings, but now devoted to the pleasure of the people.

The well-to-do citizen of Worcester is apt to give scant attention to our present park system, or to the need for its enlargement or support. He can obtain his rural delights in the mountains or at the seashore, with rod and gun in the wilds of Maine, or in summer residence in the hill towns that surround our city; or he can seek occasional respite in European travel, but to the majority of our inhabitants such resources are closed and their appreciation of the beneficent uses of our public parks is attested by the thousands who annually visit them.

Not many generations will have passed before Worcester will have doubled its population, and it is the needs of the Worcester that is to be that we of to-day are called to consider. That which may be deemed a luxury now a few years hence will become a necessity, then perhaps unattainable, because we failed to foresee the future, or, foreseeing, neglected our obligation to provide for it.

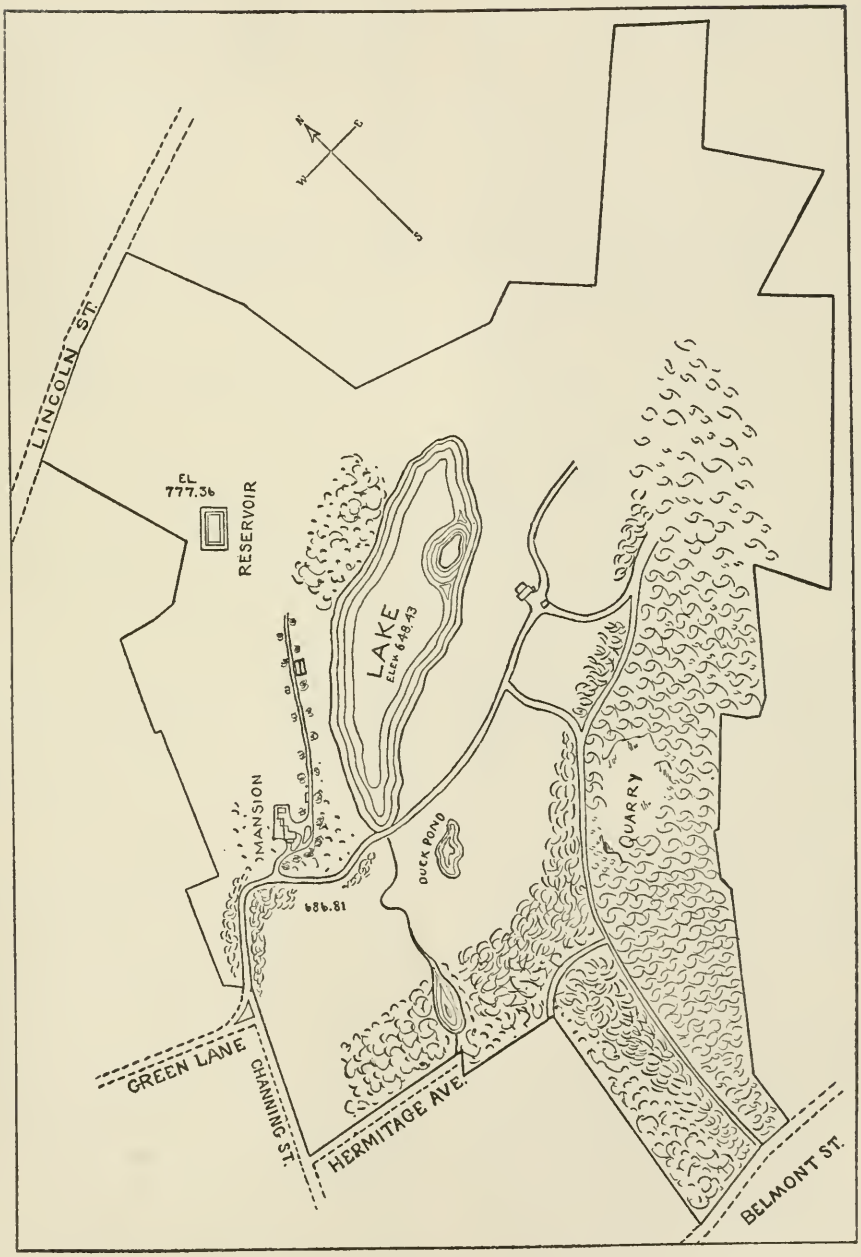
The acquisition of a large park is denied to many municipalities for the reason that a suitable tract can not be found, or, if found, is not under a single title, and conflicting interests or an inflated estimate of its value render its attainment impossible, and when acquired many years of time and a large expenditure of money are required to adapt it to park purposes.

Worcester is fortunate in its opportunity to secure for a nominal sum a tract of land which not only possesses all the requisites of a large park fully meeting the demands of our city, but has in addition some qualifications which are so rare that we venture a few considerations applying to the use of Green Hill as a public park.

Green Hill, now offered to the city for a park, contains about 500 acres situated upon an elevated plateau, from which the watershed descends on every side—on the east toward the Quinsigamond valley, on the north toward the Home Farm, on the west toward Lincoln Street, while to the south it has the drainage of Hermitage Brook. It comprises both arable and wooded land, with a widely diversified surface, containing one of the highest elevations in the city. In its eastern portion an elevated ridge affords a view of the Quinsigamond basin and the towns beyond, with an extended horizon receding into the blue haze of the distant eastern hills. Other elevations give magnificent views to the north, west and south, and as the eye stretches across the intervening valleys, the great mound upon which you stand seems to claim a kinship with Wachusett, Asnebumskit and Mount Saint James—more ancient than city councils or park commissions. Almost at your feet the undulating valley closely packed with buildings stretches away to the south, each of its hilltops crowned with some educational institution, the pride and glory of our city. And if, perchance, while watching the curling smoke of the valley and listening to the vast hum of its industries, you feel yourself a part of its ceaseless activity, but a few steps to the rearward and all is transformed. Amid the unbroken seclusion of nature you are alone with the green fields, the blue sky, and the carol of birds, and you realize how pleasant it is:

"* * * *through the loop-holes of retreat
To peep at such a world—to see the stir
Of the Great Babel and not feel the crowd."

Between the eastern and western elevations nestles a lake of twenty-five acres, fed by perennial springs and forming the headquarters of Hermitage Brook, a translucent gem in an emerald setting. On either side the sloping fields under lavish expenditure, guided



HON. ANDREW H. GREEN ESTATE—OFFERED TO THE CITY FOR A PUBLIC PARK.

by a thoughtful judgment, have been made to contribute for generations to the demands of private enjoyment, resulting in a completed park, ready for an immediate entrance and public use, which would otherwise require at least twenty-five years of time and an outlay of $10,000 per year to accomplish. The estate, therefore, represents for park purposes an equivalent investment of a quarter of a million of dollars, thereby saving to the city not only this expenditure, but what is of more moment, the long delay required for the processes of nature to supplement the labor of man. This tract is accessible on three of its sides by three separate lines of electric cars—on the northwest by Lincoln Street, on the southwest by Channing Street, and on the south by Belmont Street, while it is approached by many city streets, making it accessible from all portions of the city, either on foot, by carriage, or at the cost of a single five-cent fare.

The owners of this estate offer to dispose of it to the city of Worcester for the value which the city's own officials have placed upon it for the purposes of taxation, namely, $104,900, upon the condition that at least 400 of its 500 acres be kept as a public park to be known as Green Hill Park, and to include the mansion house. Should this offer be accepted by the city, the owners offer to donate to the city the sum of $50,000 toward the purchase price, it being an individual contribution of $10,000 from each of the five owners, thereby leaving the net cost to the city of the entire tract $54,900, or a trifle over $100 per acre.

The cost of this tract of land, as compared with the acre price of land sold recently and within a few years within the city limits, seems exceedingly moderate, nor will the cost appear excessive in comparison with sums already paid by the city for park land, as follows:

Elm Park and Newton Hill, 88 acres, $62,000.
East Park, 66 acres, $50,000.
North Park, 41½ acres, $36,000.
Crompton Park, 15¼ acres, $60,000.
University Park, 13 acres, $86,000.
Total, 223¾ acres, $294,000.

It should be borne in mind that all of the above tracts have incurred a considerable outlay to bring them within the requirements of a public park. These purchases, however, have been fully justified and are now adduced only for the purpose of comparison. The smaller parks of Worcester, surrounded by settled portions of the city, are garden spots in which the necessity for an ornate and decorative treatment require a large annual expenditure which will in a great measure be optional at Green Hill, and a large sum need not be required for its care and maintenance, which for the present at least can be met by the income from the estate.

Among the many features that adapt Green Hill for the purposes of a park, the Park Commissioners feel that added emphasis should be given to its elevation of between 600 and 700 feet, its drainage, rendering it a natural sanitarium, high above the turmoil of the street, and tempered by the cooling breezes of the hills, to which the well may resort for relaxation and amusement, and the invalid for rest and restoration, where the street beneficiaries of the fresh air fund may repair, or the votaries of nature may renew in sequestered wood or field their kinship with mother earth.

The Park Commissioners, after a careful inspection of the Green Hill estate, and full consideration of the many benefits to be derived by our city from its use as a public park, recommend its purchase upon the terms named in the communication from Samuel M. Green and his co-signatories, believing that such action will meet with favor by our citizens, and realizing that an opportunity can never again be presented to the city of Worcester to acquire a tract so admirably fitted for a public park.

We must also believe reasons of sentiment and public spirit have moved its owners to make to the city so generous a proposal, in order that the acres associated with the memory of an honored Worcester family may forever be dedi-

cated to public service by a disposition not only creditable to its present owners, but in entire consonance with the feelings of the late Andrew H. Green, who exhibited a lifelong interest in public parks as the crowning beauty of a city and the source of healthful enjoyment to all its people.

(Signed) O. B. Hadwen,
James Draper,
Edwin P. Curtis,
B. W. Childs,
Rufus B. Fowler,
Board of Park Commissioners.

Worcester, Mass., Sept. 14, 1905.

WORCESTER BOARD OF TRADE.

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The Worcester Board of Trade wants to keep on file at the Secretary's office a complete list of places where floor space can be secured for manufacturing and business purposes. There are calls made every day for such information. The Secretary would appreciate it if every owner of a building in Worcester used for manufacturing or mercantile business would furnish particulars of what he has for renting purposes, and if land-owners would also file a list of available building sites. State owner, location, whether store or factory, amount of floor space, amount of power available and approximate rental. If it is land for manufacturing purposes, state owner, location, number of square feet, general dimensions, any building thereon; if so, give floor space, number stories, brick or wood, power plant with horse power, and purposes last used. Also give name of railroad near it and side-track facilities. Give price that can be used as basis of negotiation.

This information is for the use of the Secretary, and is not to be used for any purpose except to locate new or present business interests. No compensation is to be asked for any lease or rental that may be brought about by the Board of Trade.

The first meeting of the Directors of Worcester Board of Trade, was Thursday, September 14th. At that time Mr. George F. Brooks was unanimously elected delegate to the State Board of Trade for three years, to succeed Hon. Walter H. Blodget, whose term expires October 1st.

In accordance with a vote passed at the June meeting of the board, President Goddard appointed a committee to consider the feasibility of new plans for the proposed Union Station, by which it will be possible to have the entrance to the depot and the tracks upon the same grade.

President Goddard made announcement of the committee chosen to investigate every phase of the proposition and to report upon its prac-

ticability. This committee comprises Rufus B. Fowler, Irving E. Comins, Paul B. Morgan, J. Russel Marble, M. J. Whittall, Charles A. Allen and John R. Back.

Mr. Irving E. Comins, of the Board of Trade directorate, has returned from his trip through Europe. Although Mr. Comins saw wonderful buildings, admired art galleries and old cathedrals and looked long and lovingly on beautiful, picturesque scenery, he is willing to admit that Worcester is all right for him to make his home in, and he is glad to be back again in the Heart of the Commonwealth.

He was accompanied on the trip by Mrs. Comins and son, Edward I. Comins, Miss Mary E. Leonard, Mrs. Edwin C. Harrington, Miss Barbara Brown, daughter of Mr. and Mrs. Theodore P. Brown, while Mr. Harrington, Mr. and Mrs. Brown and Miss Lucy Bill of Paxton met the party and returned home with it.

The party sailed from New York on the American liner Ryndam, June 14th. They visited cities in Holland, Germany, Austria, Italy, Switzerland, France and England. Mr. Comins was more impressed with Holland and Germany than with any of the other countries, so far as modern development was concerned. In Italy it was largely historic, while in Switzerland the feature of the visit was of course the scenery. In both Holland and Germany the people seemed to be very busy with new buildings. Next to England, Germany and Holland are the most progressive countries he visited.

Mr. Comins was very much impressed with some of the railway stations, more particularly Frankfort, Dresden and Cologne, in their general conveniences, size and arrangements. He said a great deal of thought was expended to make them as good as possible, and he was glad to see the attention that was bestowed on the matter of erection of a station in Worcester. In his opinion, the building of a station was not something to be passed by lightly, as it would probably be a long time before they would build another one in Worcester. He said he didn't know of anything that caused a traveler to form a good or bad opinion of a town or city so quick as his first impression of the place got by the general appearance of the depot.

He said they met Rev. Dr. Almon Gunnison and his party in Rome, and Dr. and Mrs. R. W. Swan in Paris. The return trip was made on the Hamburg-American steamer Pretoria.

Mr. William H. Robinson, senior member of the jewelry firm of Robinson-Anderson Co., formerly Robinson-Hilton Co., 375 Main Street, died suddenly at his home, 160 Highland Street, August 3d, from heart disease.

Mr. Robinson came to Worcester in 1868, and bought the jewelry business of Rev. Fr. O'Neil at the corner of Main and Foster Streets, forming the firm Blake & Robinson. He later bought out Mr. Blake's interest and continued the business in his own name until 1887, when he went with the A. L. Burbank Co. With Nelson H. Davis he formed the Robinson-Hilton Co. The firm later became William H. Robinson & Co., and in March the firm of Robinson & Anderson succeeded.

He leaves five children: Mrs. Henry A. Reynolds, William F. Robinson, Leonard Robinson and Miss Christine E. Robinson, all of Worcester, and Henry K. Robinson of St. Louis, Mo.

Mr. Robinson was one of the founders of the Worcester Reform Club, of which he has been president for many years, and for several years had been a member of Worcester Board of Trade.

The funeral took place the6th and was largely attended, services being conducted by Rev. Dr. Eldridge Mix. The body was taken to Amherst, the place of Mr. Robinson's birth, where the burial was in the Amherst Cemetery. The bearers were his sons, Linwood Robinson, William F. Robinson and Henry K. Robinson, and his son-in-law, Dr. Henry A. Reynolds.

The William Allen Sons Company have shipped to Portsmouth Navy Yard, for erection at the new Naval Prison there, one of the biggest steel stacks ever constructed. The stack when put in place will tower into the air to a height of 150 feet. The contract was awarded to the Allen company several months ago by the United States government and under its terms it is to be not only constructed, but erected and in place before December 1st. The stack is 72 inches in diameter and, unlike the average steel stack of from 75 to 100 feet, will be erected in pieces, instead of in a single shaft.

The company has just begun work upon two large locomotive boilers for the New York Central Railroad, the order being a duplicate of one filled several months ago. The contract upon these boilers is that they will be ready for delivery January 1st, and they will be capable of developing 1500 horse-power.

The company has recently gone into the locomotive end of boiler construction and now has in its yards on Green Street, ten old boilers of the New York Central road, in which are being inserted new fire-boxes.

THE WORCESTER MAGAZINE

Vol. VIII. NOVEMBER--1905 No. 11.

Magazine and Municipal Comment.
For Better Ballot Counting.
Our Schools—Our Country—Our Flag.
Do Unions Check Output?
Board of Trade News.

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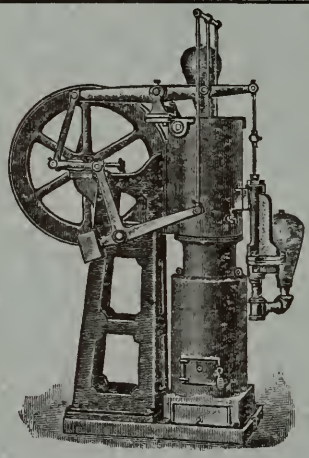

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WORCESTER, MASSACHUSETTS

A BIT OF NATURE—ENTRANCE TO "WEST VIEW" GROUNDS.

The Worcester Magazine.

VOL. VIII. NOVEMBER, 1905. NO. 11.

This magazine is published by the Worcester Board of Trade. Its reading pages are devoted solely to municipal development, good citizenship and the business welfare of Worcester. Space in these pages is not for sale.

MAGAZINE AND MUNICIPAL COMMENT.

To Correct Census Figures

At the suggestion of Worcester Board of Trade, the Worcester census for 1905 is to be revised. Chief Chas. F. Pidgin, of the State Census Bureau, sent several experts from the Boston office to Worcester to correct errors and learn, if possible, what increase was due Worcester's census figures. He made the statement that he sent two experts to Worcester to get things straightened out, to satisfy himself about the Worcester figures.

Must Live Within City's Limits

The Boston School Board is considering an order to the effect that no person shall hereafter be appointed as instructor or teacher in the public schools who is not at the time of such appointment a resident of the city of Boston. This is about as stupid a measure as could be imagined. There is no decent reason for such action.

Our educational system is supposed to be conducted for the benefit of children who desire to be educated, or whom, at least, we desire to educate. The best system is that which will produce the best results in the time during which these children are under public tutelage, and it is the business of the School Committee to so organize and conduct schools that they shall serve this high end. In other words, it is the duty of a city to give its children in the formative period of their lives the best that it is able.

A Boston paper, commenting on this order, says:

"Other things being equal it may be proper to select from the teaching force those who are residents of Boston. But other things are not always equal and such a rule as that proposed might and frequently would abridge our opportunities to acquire valuable and sometimes superior talent from without. We hardly think public opinion would approve giving a contract to build a bridge or establish a pumping plant to a city contractor if it were known that one from the outside for the same money would give the city much better results. That may sometimes happen, but were we to make a hard and fast condition by ordinance that only Boston contractors should be given Boston jobs, we should very justly be put to scorn. Yet we can see little difference in principle between such a grafters' law as that and the proposed exclusion of everybody from our teaching force who does not make his or her home in the city proper.

"No better means than this could be suggested for promoting the dry rot of educational inbreeding. It is frequently desirable to avail ourselves of fresh ideas and new methods, and these may be best represented by a teacher a thousand miles away who has made a reputation for something that exactly fits into our needs."

Be An Active Member

Co-operation in a broad sense is the grandest word in the English language. What would the world be without co-operation? No government, national, state or municipal; no society, religious, benevolent, fraternal or organized for business or pleasure, can endure without the principles embodied in the word "co-operation." By thoroughly understanding this term and applying it is the only way we can conserve our liberties, perpetuate free government, protect our families, and insure success in business. No man can be a member of the Board of Trade in theory only. Membership demands action. It has to deal with conditions. A man may profess a great interest in the Board, but if he fails to support it by work, he is a "dead weight." The support of an organization consists not alone in the payment of assessments and dues. Money never made a successful organization, nor has it ever maintained one; that fact is exemplified in the Los Angeles Chamber of Commerce, which has a membership of 1800 workers, and through united effort has brought that city prominently before the world. A great many members do not display the personal interest in the growth and welfare of the city that they should. There is no doubt that when the attention of absentee members is called to the fact that regular attendance at the Board meetings is absolutely necessary, not only for the advancement of their own interests, but also for the prosperity of the community at large, they will be present at the meetings, and by their voice and vote help on the work that the Board of Trade is doing for them and for the whole city.

Mayor Blodget's Health

For several weeks the city has had vital concern for the health of its Mayor, Hon. Walter H. Blodget. Confined to his bed for many days, pain and suffering were relieved by a surgical operation. It is a source of relief to know he is able to be about the house and will soon be again at his office. Possessed of a not over rugged constitution, Mayor Blodget has done a vast amount of work during the past few months, which greatly affected his health.

Needed in Many Cities

A new paper has been started in Auburn, N. Y., which apparently intends to dip into municipal affairs in a most relentless manner. District Attorney Jerome of New York says he knows what the Auburn Citizen will stand for, because he knows the type of men who will control its policy. It will stand for many things, but primarily for a full and patriotic discharge of civic duty by every man and woman living in Auburn. The paper declares in its salutatory that "city affairs are business, not politics," and that in municipal campaigns it will not ask, "Is this man a Republican or is this man a Democrat?" but rather, "Is this man honest and reliable—will he be likely to make an efficient public servant? Will his election conduce to the good government and progress of the city?" There are other cities that need an Auburn Citizen.

For More Service

Worcester gets another convenience from the postal authorities. An order has been issued from the Post Office Department which provides that the railway mail clerk on the express train between New York and Boston, by way of Springfield, shall sort the mail by business addresses and arrange the parcels and packages with reference to the Worcester street address or post office box.

This is the first order of the class which has ever affected the business of the Worcester post office. The train arrives in Worcester at 5.15 o'clock in the morning, and when it is on time, the business mail can be assorted for the

first delivery to the business districts, but frequently not for the first delivery to the wholesale centres. But if the train is only slightly off schedule it is not possible to make the delivery of mail from that train in the first business delivery. This will insure the delivery always when the train is within a reasonable distance of the schedule of arrival.

The mail will arrive in packages at the post office for the firms. That is, all mail for Jones & Co. will be in one package, and all for Smith & Co. will be together. These packages will have to be opened and the Worcester postmark put on, but the placing of it in packages by the railway clerks will greatly facilitate getting that work done. This will apply to the post office and Station A. The opinion of all persons acquainted with the handling of mail is that the order is of great importance to the post office.

There is No Slump

The Boston Transcript has analyzed the new census figures in their relation to industrial conditions with satisfactory results. It is argued that an apparently slow growth indicates a slump in business conditions, which is by no means true. While a good deal of the census data essential to final conclusions with regard to the operation of causes and even to the location of causes remains to be published, the completed enumeration now at hand should be corrective of a tendency to certain hasty generalizations that has manifested itself. Because our population has not increased at the same rate between 1900 and 1905 that it maintained between 1895 and 1900, it is held that there has been a "slump" in the leading industries of the State, that there has been less work and consequently there are fewer workers. This opinion is expressed in the face of the continued general prosperity of the people of the Commonwealth, the belief being persistently held that the number of workers is the index of production. To this an objection may be made, and with great force, that the steady increase of machine power in labor-saving devices has brought about results which deprive human numbers of their value as an index of production. One hundred men to-day produce far more than double the output of one hundred men of fifty years ago, while in the last decade the application of machinery has entered upon what were regarded as crafts securely intrenched against its invasion, notably type-setting, for an example. How far the process has gone by which production outstrips population is one of the conditions on which the census should throw the light which the mere enumeration does not afford.

Meanwhile the enumeration cannot fairly be considered to show a "slump" of our industries as a whole. It evidences a check in the rate of population increase, but still the State has grown, and the number of inhabitants is 193,000 higher than when the Federal enumerators completed their labors in 1900. This increase, as we have already stated, is largely urban. The dwellers in cities constitute fully sixty-seven per cent. of the inhabitants of Massachusetts. This is a fact that sufficiently demonstrates that the great industries of the State are by no means headed to the dogs, for the process of concentration of population and business is one of the most emphatically marked of the social conditions of the day. The factory seeks the city rather than the country. It fellowships with other factories. Time was, and not long ago, when some employers tired of labor troubles experimented with country help and removed their plants to small places out of touch with the great centres of population, but speaking by and large the result was not such as to create a movement. If the rural help worked cheaper and was more easily satisfied than that of the city, the country town has its disadvantage in the way of smaller banking facilities, distance from markets, and greater cost of transportation of supplies and products. In the not very long competition the city won. Presence in or proximity to a city being one of the conditions essential to success in manufacturing to-day, marked urban development is a pretty good indication that industries are holding their own where they have been established. In view of this fact, for so it may be called, an examination of the returns of the cities

of Massachusetts does not justify the idea that all our industries are "slumping." If Fall River and Lowell, great mill cities, are practically stagnant in population, Lawrence and New Bedford, also leaders in textile industries, record noteworthy gains. The increase in Fall River over 1900 was but 834, while apparently the population of Lowell is 124 less than by the enumeration of 1900. Lawrence, on the other hand, gains 7,385, and New Bedford 11,879. Of the shoe towns, Lynn gains 8,512, Brockton 7,719, and Haverhill 643. Worcester, which is a hive of industry, is reported with 127,765 inhabitants, as against 118,421 enumerated in 1900. This increase of over 9,000 is, however, disappointing to local pride, though a gain of nearly nine per cent. in five years is one by no means to be despised. Boston, though much manufacturing is carried on within its limits, can scarcely be considered a manufacturing city for the purposes of this comparison. It is too largely mercantile as well.

Good Water, and Plenty of It

With the cold weather coming on and the brooks and ponds soon to become ice bound, Worcester has an ample supply of good water to carry it through the winter. The semi-annual water inspection recently made shows a decidedly satisfactory condition of things. There are safely stored 2,500,000,000 gallons of as good water as any city can boast. Based on an average consumption of 10,000,000 gallons a day, this supply in storage will last 250 days—or well into the summer of 1906. The supply comes from the Tatnuck Brook and Kettle Brook watersheds, being entirely a gravity system from storage reservoirs in the hills west of the city—an ideal watershed. These watersheds possess a considerable percentage of forest areas, while Lynde Brook, which lies between the two, is practically deforested. The tributory drainage areas amount to almost twelve square miles. The question of additional supply is before the City Council, provision being made for developing the Asnebumskit watershed. Worcester has the water proposition well in hand.

Best Evening Schools

No city in the country can boast so strongly of its evening schools system as Worcester. It is a splendid system, and this year the attendance is far ahead of any other year, the total registration amounting to more than 1500 on the opening night. This is upward of 300 more than at the opening of the school for 1904. The high school registration is exceptionally large, the number October 15 reaching 700. There were about 2000 pupils in the evening schools last year and 102 teachers were employed. The branches taught in the high school cover nearly everything done in day school. They include Latin, French, German, Spanish, algebra, geometry, physics, chemistry, arithmetic, English literature, English grammar, geography, history, civil government, stenography, typewriting and bookkeeping. There is no excuse for Worcester boys and girls not getting an education.

For an Industrial Exhibition

The Business Men's Association of Auburn, N. Y., has completed arrangements for an industrial exhibition. It is to be given in the freight house of the New York Central Railroad, and space is free to exhibitors. The building contains 18,000 square feet of space and has been cut up into booths 12 x 15 feet.

While the size of the building is large, it is not sufficient to admit a fair sample of all of Auburn's industrial products. Many have had to be refused because of lack of space. The booths were promptly taken by Auburn's public spirited manufacturers. The citizens of Auburn will surely appreciate the generosity of the manufacturers and others in going to the unusual labor and expense of installing under one roof samples of their product, many of which are expensive to move and require the time and labor of many men.

The admission is free, the expenses being cheerfully borne by the exhibitors. This is done for the purpose of stimulating civic pride and demonstrating to many of the citizens what a wonderful centre of industry Auburn has become. After passing through that long freight house with the product of the city's in-

dustries installed on either side, it will make the wage-earner feel more loyal than ever to Auburn and that he has a part and share in our industrial development and the employer will take a just pride in the results achieved from the talent and money invested.

Why cannot Worcester do something on these lines? Where is there a more important manufacturing city? An industrial fair, even along these lines, would have some good effect. Why would it not be a wise move for Worcester manufacturers to maintain a permanent exhibition? Machine buyers are daily visiting Worcester. Why not have some central point for them to inspect Worcester's machine product? Worcester does not do enough to push its goods into the market. Worcester made goods are acknowledged the best in the country, and makers rely on this reputation to sell them. A central machine exchange is a good idea.

The First Step Taken

The City Council has finally got down to doing something on the widening of Shrewsbury Street proposition. An order has been passed authorizing a $30,000 loan for the work. The plan is to widen the street from Union Station to Lake Quinsigamond to a width of 100 feet, giving the city a boulevard from Washington Square to the Shrewsbury line. This is a long stop in the way of a bridge at the lake, which is one of the city's needed improvements. Within the past five years the lake property has been developed to a remarkable degree, and indications point to further development of the property. The causeway is a disgrace and there is no excuse for not making the needed improvement.

The plan for Shrewsbury Street is to work it in three sections. Mayor Walter H. Blodget has signed the decree for widening the first section—between Adams and Belmont Streets. This action advances the cause of municipal progress several points.

The cost of the undertaking is in no way equal to the importance of the improvement, and the increase of value in property adjacent to the improved thoroughfare will more than repay the city for the outlay. To delay the work, would be simply to increase the cost, for the work must be done sometime. Progress and improvement cannot be purchased for nothing, but can be furthered and fostered much more cheaply at an early stage of the game than later, when old and established conditions must be overhauled.

Shrewsbury Street is the main highway out of the city to the city's chief pleasure ground. It is the most traveled of all the roads which lead eastward from the city, and is the direct road between the centre of Worcester and the centre of Boston, including all the towns and cities of the metropolitan district. Grafton Street, far to the south, and Lincoln Street, far to the north, serve as partial outlets to the eastward. The Grafton trolley line, which crosses the foot of the lake, carries a small portion of the eastbound traffic. But the causeway, Belmont and Shrewsbury Streets, carry far more than fifty per cent. of all the traffic which goes eastward from Worcester or comes from the east into the Heart of the Commonwealth.

To Beautify the Lines

The annual award of prizes by the Boston & Maine Railroad for the best grounds around the railroad stations along its lines, calls attention to the fact that every year there is a gain in beauty in unlikely places. There are few of the leading railroads now which do not make some effort to beautify their lines, and to cover up those unsightly objects which were once considered essential to a railroad station. It is noticeable that where a company has encouraged the beautifying of station grounds by the offer of prizes, or has gone into ornamental horticulture on its own account, like the Boston & Albany and the Pennsylvania lines, there has been an increased interest among the people who live near the railroad, and a general tendency toward the improvement of private grounds. Thus the good work is spread by the railroad companies. That it pays is attested by the fact that people generally

prefer the line of travel which offers most in the way of beauty.

Voice From New South

The Magazine this month prints an address given before the American Missionary Association at its annual session in Worcester Oct. 18, by Hon. A. C. Kaufman of Charleston, S. C. The subject selected was "Our Schools—our Country—our Flag," and is characteristic of the progressive South, and is memorable in the annals of the Association. It was of exceptional interest and importance, coming from a typical Southern gentleman representing the new growth of the South on educational and industrial lines, one who is watching the roseate dawn of the coming day.

Industrial Commission in Worcester

Governor Douglas' special commission to investigate the subject of trade schools, is still getting evidence. President Carroll D. Wright of Clark College, is chairman of the commission, which is made up of prominent industrial workers and labor representatives throughout the State. The Worcester hearing did not attract nearly as many as it should have, and no especially new ideas were brought out. Representatives of the master builders set forth the needs of education along their lines, and Prof. George I. Alden gave a suggestion on lines of industrial education in the public schools. Mr. Jas. H. Mellen represented the trades union and did not favor trade schools. He said it was impractical to maintain schools for all the trades, and it would be unfair to select certain trades for educational purposes. He believes in industrial education, but not trade schools. The evidence taken by the commission appears, as a rule, to be all one way. Not only sociological experts, but Y. M. C. A. and Y. W. C. A. workers, priests and laymen, teachers, business men, industrial leaders, all agree that trade schools are the one thing needed in this Commonwealth to open up fields for ambitious young men and women, and to keep the industries of this State up to the place they ought to hold. Possibly it is because the trustees of the Carnegie-Franklin fund have not attended the hearings, that they still hold out against a trade school.

If the commission makes its report and it is not satisfactory to the people in Worcester, who ought to be interested, it being the largest manufacturing city in the State, there is no one to blame but themselves.

Just One Day's News

How often does one hear the remark, "There is nothing new." People are so accustomed to have a moving picture of passing events passing before their gaze daily that they recognize nothing in the news line unless it be of extraordinary character. Every page of the newspaper of to-day shows the skeleton of a novel—as good as any to be found between cloth and paper covers. Here is the news of a single day as recorded in the news prints:

A man in Chicago, charged with murder, may escape the death penalty because he has an ossified neck, and it would probably be impossible to hang him successfully. A man has been discovered in New York who has for two years impersonated his dead cousin as a clerk in the bureau of assessments and arrears; on the day the warrant was issued for his arrest, his salary had been raised from $600 to $1200. A little girl dies from swallowing a stick which had taffy on it, her jugular vein being pierced. A Philadelphia man meets a woman Saturday, marries her 30 minutes later, and she disappears Monday, whereupon he applies for a divorce. A wealthy woman of Vincennes, Ohio, twenty minutes before her death wrote a will leaving $10 to pay for her funeral sermon, and $135 to pay the undertaker. A letter mailed six years ago is correctly delivered in Plainfield, N. J., after long travels. A $1200 pearl necklace stolen thirty years ago is mysteriously returned by mail, with no clue to the sender. A New York man, once the business associate of Jay Gould, Vanderbilt and others, goes to the poor house.

FOR MORE RAPID COUNTING OF BALLOTS.

EVERY good citizen interested in political movements, whether state or civic, turns his attention at this season, more than at any other time, to the question pertaining to the ballot box. Here in Massachusetts, as a whole, and certainly in Worcester, we can afford to point with pardonable complacency to our electoral system as we look abroad and see exhibitions of fraud and corruption in certain large centres of population in other parts of the country. Worcester has yet to take her baptism of fire as a member of frail electorates. But if the time should ever unhappily come when the ballot box in Worcester can be successfully assailed on the score of dishonesty, it is safe to say we have sufficient stock of healthy political morality stored up in our body politic to make those responsible for such disgrace suffer bitterly for their misdeeds.

The Australian ballot has now been in operation in Worcester some seventeen years or more, and taken as a whole, if we except one blot upon the system, this style of secret voting has commended itself through all these years of trials to the voters of Worcester regardless of political affiliation. But as has been intimated, there is a defect in the system and until this is remedied it cannot be said with truth that the Australian ballot is used in Worcester to the full extent of its efficiency.

To come to the point. We are decidedly weak when it comes to the point of counting the votes. Our plan of doing this is wrong in its very essence. All persons who have had the experience of an election night in Worcester—whether it be the eighth of November or the second Tuesday in December—whether they be the workers in a newspaper office or citizens in their homes or at their clubs, or in the streets watching the stereopticon sheet—all agree, without a moment's hesitation, that the announcement of the result of the poll in the various precincts is both tedious, belated, and in many cases inaccurate where accuracy should be unimpaired. The polls close at 4 p.m. and the counting of votes begins immediately. Quite frequently it is well along toward the midnight hour before the thousands of anxious voters throughout the city can retire to rest satisfied that they know the result of the day's battle with the ballots, and even then the small hours of the morning find the newspaper men still waiting for some tardy precinct officer to send in the return to the heavy-eyed and exhausted officials at City Hall, so that they may get the final results and close up their tables in the composing rooms Worse still, the occasions are by no means few, since the introduction of the Australian ballot, when the morning newspaper has been obliged to go to press with the regular edition barren of complete election tables because one or two precincts have not forwarded returns to the city clerk as late as 7 o'clock in the morning. In addition to all this, the election has been rare when some disappointed and disgruntled citizens have not insisted upon their rights and demanded a recount of these belated returns, with all its vexatious and unnecessary labor, and by no means inconsiderable expense to the city.

It needs no argument, however, to show the necessity of reform in the system of counting votes which has these defects, and it requires no magician's wand or Edisonian inventiveness to produce a remedy that will be at once complete and satisfactory to every citizen, excepting, if we must, the half dozen or so "all the year round" ward workers who get their little stipend on election as their reward for political enthusiasm in the cause of this or that party.

Now as to the cure. One has to simply look across the water to see how the so-called Australian ballot works which has been in operation in every constituency in Great Britain and Ireland since 1874. Stripped of all irrelevant detail,

coming down to the feature of the system which is here discussed,—that of counting the votes,—these facts are found: The voters of Liverpool, Dublin, Manchester, Glasgow, Edinburgh, and London vote by precincts exactly as they do in Worcester, Boston, Chicago, Fall River, Lawrence or New York, but here the parallel comes to a dead end. The polls here are closed at 4 p.m. In the British cities the polls are kept open until 8 p.m., so that no man can have any justification, whether engaged in business for himself or working for an employer, for saying he could not spare the time or was not allowed to leave his place to register his vote. At promptly 8 o'clock the doors of the various polling places in the precincts are closed. A carriage is standing at the curb. A moment later the precinct officers, accompanied by a policeman, emerge from the precinct room bearing the ballot box, whose lock was sealed before it was taken from the city clerk's office the night before. These men enter the carriage and as fast as the horse can travel they are driven to the city or town hall. The largest chamber of the municipal building, usually the legislative chamber, has meanwhile been transformed into a temporary counting house. Here, with coats and vests off and sleeves rolled up, awaits the corps of "scrutinizers." These men are all taken from the various banks of the city, each man being the teller of the bank, and all accustomed to rapid counting. It is needless to expatiate upon their fitness for the work that is before them. Day after day for years, from the opening of the bank in the morning to the close at night, they are engaged in the most expert performance of duties which permit no delay or error in their result. Success and accuracy are the watchwords of these men's daily lives, so that when election day comes and they are called to "scrutinize," tabulate and count the vote of a large city, the work comes to them with all the ease of "second nature." Admission to the counting chamber is strictly limited to the members of this corps of "scrutinizers," the various candidates running for office, their legal advisers, the mayor of the city, the high sheriff and representatives of the press. All others are excluded.

As the last ballot box is opened and its contents dumped on the promiscuous heap of ballots already upon the table, the mountain of work before this corps of expert counters seems to the uninitiated perfectly appalling. The work progresses with lightning-like rapidity. The great heap of ballots is quickly reduced to a series of uniform packages. The men work in pairs, one calling, the other tabulating. In an almost incredible space of time the first count is handed to the mayor and chief of the counting force, and without a moment's delay the second count begins. The man who had hitherto worked on the right hand side of the table, changes to the left, and vice versa. Then the second count progresses with the same top rate speed. If the result agrees with the first table, and it almost invariably does, various candidates accept the figures and that is final. To be sure, when the result approaches a tie, or is a tie, there is a third count and a closer examination of all doubtful ballots, and this of course takes a little longer than the first stages of the work; how long of course depends upon the points raised by contending counsels and other arguments in connection therewith.

In the general election of 1886 the vote of the city of Liverpool was announced to the officials and Mayor at 9.15 o'clock, one and a quarter hours after the closing of the polls. On that occasion a dispute arose, as the result was close and some important points of law being raised. The Mayor of Liverpool, in view of the great excitement attending the election, decided to have the recount of the votes the next morning. In the final vote, the home rule fight being the particular issue, showed a majority for the winning candidate of thirty-five in a total of 60,000 votes. This counting of three times the number of votes cast in Worcester, was done in a trifle over one hour. The recount of these votes was made at 9 o'clock the next day, and two hours later the result of the election was agreed upon beyond

all dispute, the figures being announced before noon.

Would it not be well to try this system of counting of votes in Massachusetts, instead of entrusting this important work of counting and tabulating the people's ballots to a crowd of men of whom it is no exaggeration to say they are as innocent of experience in the way of counting and rapid fire tabulation as a child in the fifth grade? It is no reflection upon these men to say this, but they are not expert counters. They may be expert salesmen, expert machinists, expert anything else, but they are not expert counters or adders of figures. They simply get the job as a reward for political activity in their respective wards. Six dollars per day with a lunch contributed, is regarded as a prize to be contended for throughout the year. Is there not room here for reform?

What the country needs is not more wealth—we have wealth enough; it is not more commercial prosperity—we have an abundance of that; and it is not principally better intelligence—for we are very smart; but it is an earnest and loving obedience to law. The black as well as the white, the rich as well as the poor, the educated as well as the ignorant, need it, for I believe the worst forms of law-breaking are not among the poor and ignorant, but among the rich and educated. The trouble with Americans is that there is always a break-down in the machinery. We have in New York a fine subway, good cars, splendid stations and excellent service and the best developed mode of rapid transit yet devised. We can go, I believe, from the bridge now to the Grand Central Station in seven minutes; yet the other day we walked, not because the cars or the electricity were out of gear, but because there was no earnest obedience to law. From the Civil War down to the present time it has been a history of this lack of obedience to law. America's greatest need is character, and the minister must make this. This is the grandest country of the world in which to make it, for if a man believes that prohibition, Buddhism or free silver will make better men he can preach it in America if he can get anybody to listen.—*Dr. Lyman Abbott.*

OUR SCHOOLS—OUR COUNTRY—OUR FLAG.

An address by Hon. A. C. Kaufman of Charleston, S. C., delivered at Worcester before the American Missionary Association, October 18.

Mr. President: This is, indeed, a happy moment of my life; I regard it a privilege to be present on this most auspicious occasion, and to offer a word of commendation to the ability, perseverance and zeal which have characterized your efforts in turning the youth of our section from darkness to light, and from the thraldom of ignorance into the liberty of enlightenment and knowledge.

Coming as I do from South Carolina, and from Charleston, her metropolis, my birthplace and home, I bring greeting to the American Missionary Association for having founded, erected and maintained for the uplift of a weaker race that splendid temple to education, Avery Normal Institute. This Institute for twenty years, less one, has been under the masterful guidance of the same principal, who while providing a full and finished curriculum, impresses upon his students the lesson that, essential as it may be, there is something higher than the mere acquisition of book knowledge. The higher thing that he teaches is the duty to cultivate those Christian virtues which improve the morals and purify the heart. These lessons have been far-reaching and effective, for the record shows (I speak from the record) that few institutions in this vast country of ours have been a more conservative force in its community or can furnish a list of graduates whose character, proper conduct and deportment in life have been superior to Avery's alumni. The Alumni Association of Avery live up to their motto, "*Vestigia nulla retrorsum.*" Some may be disposed to question the accuracy of these statements, but they are facts, and facts, like figures, do not lie.

Sir: the twig of higher education which was planted fifty-nine years ago by the founders of this Association, and been nurtured with such unceasing vigilance by their successors, has become a sturdy tree beneath whose sheltering branches many a disconsolate soul has found refreshing shade and thanked God for the inspiration of hope it has brought to them.

Of this tree, some one may yet say, perhaps has already said:

However little I may be,
At least I too can plant a tree.

And some day it will grow so high
That it can whisper with the sky.

And spread its leafy branches wide
To make a shade on every side.

Then on a sultry summer day
The people resting there will say:

"Oh, good and wise and great was he
Who thought to plant this blessed tree!"

New England bounty and New England philanthropy (whose atmosphere I now breathe) and the mainspring of the American Missionary Association—the organization that has given to Charleston the Avery Normal Institute which has achieved these results. May this benignant Association go on prospering and to prosper, without limitation to either time or means. May her ways be ways of pleasantness and all her paths be peace.

This Institute was organized in 1865, and was subjected to many vicissitudes as to location until 1868, when the new building it has occupied ever since was completed, the name agreed upon being Avery Normal Institute, in honor of the Rev. Charles Avery, a Wesleyan clergyman of Pittsburg, Pa., who had previously made the munificent donation of $150,000 to the American Missionary Association for the education of the colored youth in the South, $10,000 of which was appropriated to build this Institute.

Avery has all the charter rights that

belong to other educational bodies in South Carolina, having been incorporated in 1892.

I shall not touch upon the history or development of the educational institutions in South Carolina—time would fail me—further than to give two significant illustrations. The one is the "Shaw Memorial School," the other the venerable College of Charleston. The account of the "Shaw Memorial School" has some interesting features connected with it—a tinge of romance.

This school was named after the gallant Col. Robert G. Shaw, U. S. V., of Massachusetts, who fell mortally wounded while leading a furious assault on Battery Wagner in Charleston Harbor on April 18, 1863.

Erected by the admiring people of his State for the education of the colored youth of our city, as a monument to his patriotism and valor, in sight almost of the spot where he fell and his body lies buried, they organized and operated it until an arrangement was effected with the Charleston Board of School Commissioners to take it under their supervision.

From that time on, full thirty years ago, the "Shaw Memorial School" with unchanged name has been and still continues to be the educational home of 1200 colored children, being maintained by municipal and county taxation.

The other monument to this famous soldier, of enduring marble and bronze, of which you all know better than I do, stands on Boston Common, and on it is engraven this suggestive inscription: "Robert Gould Shaw—*'Omnia relinquit servare rempublicam.'* "

The College of Charleston—*clarum et venerabile nomen*—the mother of colleges in South Carolina, was founded in 1770, chartered in 1785, and opened to students in 1790, her first President being Gen. William Moultrie, then Governor of the State. Her name is indissolubly linked with the dear old city whom she has ever honored and her fame made imperishable by the great men whom she has sent forth from her classic walls to adorn and dignify their state and country.

What grand old Harvard University, founded in 1638, first in years as well as prestige of all the colleges in the United States—mother of them all—is to Massachusetts, so is the historic College of Charleston to South Carolina, antedating all other institutions of learning in the State.

The institution of distinction next in age is the old South Carolina College, opened for students in 1805 and in which the entire citizenship of the State takes an especial pride.

It would be the play of Hamlet with Hamlet left out to omit mention of the public school system of Charleston which went into active operation in 1855, supplanting the "free school" course in vogue up to that period. They were rightly denominated "free schools," for the freedom in them was limitless. The present system, compared with the former, is as "Hyperion to a satyr." The product of these schools is shown in the sons of our plainest people of fifty years ago and less, who to-day are numbered amongst our most prosperous sagacious business men and useful respected citizens.

Much of the effective work in these schools is due to the intelligent ceaseless labors of their faithful superintendent, Henry P. Archer, who for more than forty years has been in their service, rising steadily from one position to another, until he has attained the highest. These schools were modeled in every particular after the New England system. So for this part of their excellence we must thank you.

In speaking of the universality of education as the most important question of the hour that the American people have to grapple with, and the most serious problem presented to them to solve, a very sagacious thinker has thus pithily expressed his opinion:

"The State must educate, that human liberty may endure the republic. Under such a government the will of the people is law. Daniel Webster held that there were three conditions necessary to the maintenance of the republic: first, universal education; second, universal voting franchise; and third, proper distribution of landed property. The ballot box must shape the destiny of our nation. When liberty is lost she will be buried in the tomb of intelligence. The salvation of the American republic is the dispersion of the vast army of

ignorance. Every child born under our flag must be prepared to meet the responsibilities of citizenship if our nation is to be perpetuated. We must see to it that there is a school for every child, and that every child is in school.''

I appreciate the generous compliment that has come to me in the invitation to address this distinguished body. This compliment has been heightened by the rare privilege of meeting the goodly people of the charming city of Worcester, who have done so much to develop and add lustre to the fame and fortune of the Old Bay State—the home of honor, culture, refinement, hospitality and wealth.

While there may be no ties of consanguinity between us, there are yet bonds of affinity welded together by our forefathers in that common struggle for freedom which brought into existence this glorious republic, which has been well styled ''an indestructible Union of indivisible States.'' We are, therefore, ''sons of the Revolution,'' and as sons, brother Americans.

I remark, parenthetically, it is true that since the formation of the American Republic we have had our differences, that during '61-'65 being the most acute. Each side thought at that time it was right and clung conscientiously, with honest tenacity, to its opinion.

'' 'Tis with our judgments as our watches, none
Go just alike, yet each believes his own.''

But a new dispensation has, in the Providence of God, dawned upon us. We have settled our difficulties like men. You were the victors, but you have had the manhood, the modesty, the magnanimity freely to admit that the intrepid Southern soldiery, commanded by the immortal Robert E. Lee, met defeat without dishonor. Chiefest in the manifestation of this feeling, when hostilities ceased, was the renowned Federal leader, Ulysses S. Grant, who, in words that burn, spake the dictum, ''Let us have peace.''

The late unpleasantness is fast fading into a memory. The sunshine of reason and mutual respect is quickly forcing its way through and dissipating the clouds of passion and sectionalism so long visible on our country's horizon.

Let us, then, with thankful hearts speed the day when you of the North and we of the South, with abiding confidence in and mutual admiration each for the other, will be again knitted together in close fellowship as were our ancestors in the days that tried men's souls, nearly a century and a half ago. ''As we know each other better, we shall love each other more.''

To revert to my theme, I would like to treat with some fullness upon the causes which led our forefathers, in desperation, to leave their homes across the seas, with their comfort and plenty, kindred and friends, yea, to abandon them all and seek refuge in this New World—citizens without a country, inhabitants without a home—but I must not trespass upon the time of others, and so I shall hurry on.

Taking a brief retrospective glance, however, at the characters of these men, whether those who set foot on the rocky shores of New England or the miasmatic coast of a more southerly clime, we find the same spirit animating them! Their purpose was identical, to secure what they had been denied at home, civil and religious liberty, man's choicest gifts, be the cost and consequences what they may.

The world stands aghast as from the pen of the historian it learns of the prowess, the self-abnegation, the sacrifices for conscience sake, the courage with which they faced danger and the fortitude with which they met disaster from the moment when they first set sail to the termination of the Revolutionary struggle. It was faith that sustained them, confidence in the righteousness of their cause that upheld them, and the belief that ''the Lord of hosts was with them, the God of Jacob was their refuge.''

Patriots of the Revolution: Yours was a dark, a trying, a tragic experience. Days of weariness and nights of gloom followed each other in rapid succession. Anxiously, as the years rolled by, did you look for the dawn of deliverance and the victor's crown.

What prayers of thankfulness then must have arisen from your hearts to Him who ruleth in Heaven and amongst the inhabitants of earth, what anthems of praise, methinks, sounded forth from your lips when the glad tidings echoed and re-echoed from one end of the American colonies to the other that their independence had been won. How true is it "this life is all a mist, and in the dark our fortunes meet us" when to unexpectant eyes "the day spring from on high opened, the angel of liberty descended, and dropped on American freedom the seal of Omnipotence."

Heroes of a memorable epoch in our country's and the world's history: "You have fought a good fight; you have finished your course; you have kept the faith." What of your name and fame — our heritage — priceless, more costly than the gold of Ophir? Shall these perish or be buried in oblivion? Never! Never!! Never!!! Our hearts are the caskets wherein they are enshrined. "There neither moth nor rust can corrupt, and there thieves cannot break through and steal."

It matters not whether your last resting place is marked by a monument whose shaft towers towards the skies, or you are numbered with the "unknown dead," the same reverence, the same love, the same devotion you shall command. No place here for the willow, but for the laurel and the palm to decorate. Shall we ever speak of you as dead? No! not dead—for "to live in hearts we leave behind is not to die."

I cannot close, fellow Americans, without felicitating with you on the opportunity of knowing that we are joint citizens of this great American republic, sharers together of a common hope, a common flag and a common destiny.

While we should each love and cherish the state in which we were born and live, treasure her traditions and her history, worship as consecrated ground the hallowed spots wherein lie entombed the ashes of those who were nearest and dearest to us in life, is natural and proper.

Yet that should not debar us from clasping hands with those of every State who, like ourselves, are more than citizens of a State, but above and beyond, enjoying the proud and enviable distinction of being fellow citizens of the United States.

For my own part, sir, I was born an American; I will live an American; I shall die an American.

We are a "peculiar people," and live in a most remarkable age. "Events so various and so important that they might crowd and distinguish centuries, are, in our times, compressed within the compass of a single life."

American genius, wrought into activity through American schools, has brought into being discoveries that have dazzled the world.

The advance in the past twenty-five years has been so much more rapid than in the twenty-five years preceding (astounding as that was), that it seems almost as if we had reached perfection.

Such, moreover, is the constant progression that it is beyond man's conception to predict or even speculate upon the marvels that are in store for the future.

"Ours, too, is a favored land—'a land of brooks of water, of fountains and depths that spring out of valleys and hills; a land of wheat, and barley, and vines, and fig trees, and pomegranates; a land of oil, olive and honey; a land wherein thou mayest eat bread without scarceness, thou shalt not lack anything in it; a land whose stones are iron, and out of whose hills thou mayest dig brass.'"

Furthermore, it is a land of liberty, "There's not a spot that God, its maker, meant not should be trod by man, erect and free; unscourged by superstition's rod to bend the knee." These are our people. This is our land.

Again—"in union there is strength"—an axiom that every schoolboy learned in his youth. The converse, the wise man tells us, also is true, "A house divided against itself falleth." History, sacred and profane, experience our best schoolmaster, the wisdom of the ages confirm these truths.

The flag that floats to-day as the emblem of our fair land—with its fixed number of stripes and ever-increasing galaxy of stars—a flag upon which the

sun never sets—proclaims to the world the potency and indissolubility of that union of States, of which yours and ours are part and parcel.

This flag—

> "Which gave the Republic her station,
> * * * *
> And made and preserves us a Nation"—

waves as majestically in peace as she has ever stood at the masthead, defiant and triumphant in war. At home, we pay obeisance unto her. Abroad we look for her as an unseen treasure, for "where the treasure is, there will the heart be also."

Therefore, when in our travels we touch and tread foreign soil, far, far away from our native land—an ocean and thousands of miles separating us—then is it that we instinctively turn to catch a glimpse of this object of our affection, the symbol of our august government. Never do we yearn so much for a sight of our flag as then. To what else can we look for protection? It must be near, we know—comforting assurance — somewhere, although concealed from our vision, for the fact remains, and we are conscious of it, that wherever we may find ourselves there is no land whereon our ensign does not float.

When the precious treasure is at last caught sight of and we behold it bowing and again lifting its stately head towards the skies, kissed by some passing breeze, we exult and a psalm of thanksgiving proceeds from our inmost soul, bringing with it melody from the heart. O! the memories of home that this sight recalls, glorious memories of home, home, sweet home.

Welcome to our friend, its atmosphere breathes rest, comfort and security, albeit we are strangers in a strange land unknowing and unknown. Nor is this solitude while above us there waves this trusty guardian, this constant, fearless, sleepless protector, whispering gently in our ears: All's well.

These are my concluding words:

> "The union of lakes—the union of lands—
> The union of states none can sever—
> The union of hearts—the union of hands—
> And the flag of our Union forever!"

And now beloved flag, good night.

The cry of the hour in our cities, large and small, is for Good Citizens: men who will not violate the law of the municipality, the state, the republic or the law of God; for men who will not be a party to others' violation of these laws; for men who will think the thoughts of the good citizen, speak the words of the good citizen and do the works of the good citizen; for men who, standing at the head of the industrial, political, social, educational and religious life of the community, known and honored of all, will give themselves to the redemption of our American municipalities from the misrule, dishonor and shame they have so long endured.—*Dr. Thomas B. Payne.*

DO UNIONS CHECK OUTPUT?

ONE of the most important reports of the Bureau of Labor is on the restriction of output resulting from trade union activity. It has recently been made public and is available for the public. There has been much speculation relative to the contents of the report among both manufacturer and employee. The volume contains nearly a thousand pages and includes the studies of many well recognized experts. Col. Carroll D. Wright, with characteristic diplomacy, put this undertaking in the hands of Professor John R. Commons, whose long identification with popular measures, and his known sympathy with the so-called "laboring classes," furnished a sufficient guarantee that their cause would not be in unfriendly hands. He was assisted by John H. Gray, Ph.D., a widely known professor of economics, and by Walter E. Weyl, Ph. D., as well as by several expert agents of the bureau. One was assigned to each of the great industries, such as coal mining, printing and publishing, boots and shoes, and the building trades, and the investigation consumed the greater part of a year.

One of the best sketches which the book contains is that of the "ca' canny" system of England, which presented in an extreme form the idea that too much efficiency on the part of the individual laborer was prejudicial to the interests of the class. It seems that in 1896 the International Federation of Ship, Dock and River Workers issued circulars. The first explained that "ca' canny" was a handy phrase to describe a new policy that might be used instead of a strike. If two Scotchmen are walking together and one walks too quickly for the other, the slower says: "Ca' canny, mon; ca' canny, mon," which means "go easy." It was then explained that a person buying a hat for five shillings obtained a five shillings' hat, and with four a four shillings' hat, because hats are a marketable commodity. So is labor, the circular recited, and the possessors of it were justified in giving value for value, or of adopting the ca' canny policy.

The secretary of this international union, Mr. J. Havelock Wilson, M. P., said that if the dock laborers ca' cannied it would take three men to do the work of two. If the sailors did it, it would take six to do the work of four, and if the firemen did it, it would take five men to do the work of three. If that was done, a hundred thousand extra men would have to be employed. So far as ascertained, the report says, only one important general trade union official expressed his disapproval of the ca' canny policy publicly at its very origin. That was James Mawdsley, the secretary of the Amalgamated Cotton Spinners. In the last few years the officials of the national unions have openly discountenanced a direct restriction of output, and now do what they can to prevent it. They realize that such a doctrine as this in the hands of their membership is likely to be abused, even according to the standards of those who originated the policy. On the other hand, it is not at all impossible that, the doctrine having been preached, a general feeling may run through large bodies of men in the local unions that this is a proper weapon to use to "get even," as they express it, with their employers. It is not at all impossible that under the pressure of public opinion a local union may formally abolish a rule and thereafter act as if the rule were still on the books. Those who have not made a careful study of English trade unions have but little conception of the solidarity among the mass of the unionists, and of the occult and mysterious way in which general sentiments run through large sections of different and various kinds of handicrafts.

For this investigation machinery was looked on as a means of increasing the speed, or output, of the individual workman, and a restriction on the use of ma-

chinery, whether imposed by employers or by workmen, is a restriction on output. This may exist as a prohibition of the use of machinery or a prohibition of the best machinery or shop equipment available at the existing stage of the mechanical arts, or it may consist in a limit to the number of machines to be tended by one man, or in the requirement that a superfluous number of men shall be employed in operating one machine, or in limiting the number of men who shall handle the output of one machine, or in setting a limit to the output of the machine or the day's work.

The concentration of industries often involves the centralization of work which hitherto has been performed in competing establishments. If the policy of the union prevents this concentration and thereby necessitates a larger number of workmen, it is counted as a restriction. Such, for example, is the rule of the typographical union, which endeavors to abolish the practice of loaning and borrowing matter between morning and evening papers. That restriction and the justifications advanced for it have been treated in this report.

The simplest form of speed-inciting is payment by the piece, with its modifications known as the bonus and premium systems. A number of unions oppose these methods and demand, instead, the flat rate of the daily or weekly wage. Throughout the investigation, it is shown conclusively that without restrictions the speed is greater under piecework than under day work, and this is what should be expected. There seems to be a curious agreement among employers that workmen paid by the piece will turn out about twenty-five per cent. more product than when paid by the day, and in many establishments where both methods are in vogue the piece rates are adjusted so that the workman will earn ten to twenty-five per cent. more on piece work.

Where the union consents to the piecework system, restrictions take the form of holding back the speediest men from their maximum exertion, either by limiting the number of pieces in a given time or the amount of daily earnings. In some cases the limit is well recognized in the trade and incorporated in the agreements of the union with employers, while in others an effort is made to keep it secret. Even where there are no formal rules it has been universally found, both in union and non-union establishments, that the common sentiment of the workman is strong and severe against those whose output is materially above the average. This fact is substantiated by the prevalence of terms of opprobrium, certain trades having each its peculiar term to be applied to offenders.

A form of speed-inciting peculiarly obnoxious to workmen is that of paying one of the speedier men of a gang higher wages to use him as a pace-setter. No case has been found where this device was practiced openly, but many union rules provide the extreme penalty of expulsion for any member guilty of accepting extra pay for such a purpose, usually under the broad charge of actions detrimental to the interests of his fellow-members. This opposition to pace-setting extends to rules governing foremen, and it is occasionally found that the rules forbid union members to work under a foreman or superintendent who receives any direct benefit from the quantity of output in addition to his regular salary. This feature of restrictions on output is brought out in nearly all the chapters where attention is directed to the rules relating to foremen, and especially to membership of foremen in the unions.

One feature of the day system is the distinction between minimum wage and uniform wage. Usually the scale established by a union is a minimum, and the employer is permitted without opposition to pay higher, but not lower, wages to individuals. This being the case, the employer could offer to the speedier men a wage higher than the minimum, and thus gradually raise the level of speed, should he see fit. But its free operation is checked by two or three conditions generally insisted on by the unions. Payment in excess of the minimum must not be computed in proportion to output, since this would establish a bonus system and a dead line, both of which are practically a return to piece-

work. The minimum is usually placed so high that, in the estimation of the employer, he cannot afford to pay more. In non-union establishments there is a much wider range between the lowest and highest extremes.

The report shows clearly that in several industries the key to the enforcement of restrictions on output is found in restrictions on the employer's freedom in employing and discharging men. Where the employer is perfectly free, as he usually is in a non-union establishment, to "take on" or "let go" his men without notice, he is able to select the speediest men, giving to them the steadier jobs and leaving the irregular and seasonable work to the slower men. In this way the competition of the men among themselves forces up the speed of all.

Union restrictions on the freedom of the employer differ widely among the several trades, and even more widely among locals in the same trade. All the unions enforce restrictions, if possible, against discharge for activity in union affairs, and this sometimes becomes a protection against discharge for inefficiency, although disavowed as such. A few unions go farther and prevent foremen from discharging men on account of personal dislike, while a much smaller number endeavor to establish an "efficiency line" and to prevent the discharge of men who attain that efficiency. This line becomes a dead letter as soon as the union relaxes its inquiry into the employer's reasons for discharge.

Restrictions of the employer's freedom in hiring men takes an extreme form where the union establishes a "waiting list." Nearly all unions maintain an optional list, kept by the secretary or business agent of the union, on which the unemployed members' names are entered in the order of their application. From this list names are furnished to an employer, if he asks for men from the union. With others the waiting list is compulsory. The employer must take men furnished by the union.

In general it appears that in so far as a union does not interfere with the employer's freedom to hire and discharge, just so far does it fail to enforce its rules, including whatever restrictions on output its members may favor. Usually the unions which do not contest this, except in matters of union activity, are the older and stronger ones. Having established the union shop they yield to the employer so long as they know that only union members, at union wages, will be taken in the place of those discharged. Younger unions strive to hedge about the employer at these two critical points, and whatever restrictions on output are actually found it is usually where the union has enforced extreme rules in this particular.

That restrictions on hiring and discharging workmen are the ultimate source of restrictions on output is made plain from the repeated testimony in nearly all trades, that in times of prosperity, when there is a strong demand for labor, the average output of the workman falls below that of periods when the supply of labor exceeds the demand. This is partly explained by the probability that in prosperous times the employers are compelled to keep inferior men, whose small output reduces the average. But it is also asserted by practically every person interviewed that men will not work so hard when they can get work in other establishments, as when they feel that their chances for other employment are slim. This circumstance has made it extremely difficult to determine to what extent the unions are responsible for the let-down in speed during recent years, since their growth has been contemporaneous with great increasing demand for labor. The president of a great railroad system, three-fourths of whose employees are not members of unions, asserts that the reports of his company show a falling off of ten per cent. in the efficiency of the labor force, notwithstanding an increase of ten per cent. in wages. Similar testimony for other industries appears in this report, and so frequent and emphatic have been the complaints of employers on this score that it is evident that the conditions in a period of prosperity constitute one of the main factors in reducing

the intensity of exertion, both of union and non-union workmen.

Associations of employers or dealers, in so far as they affect output, are of two general classes, those based on price agreements and those based on output agreements. Price-fixing associations range all the way from informal "gentlemen's agreements" to highly perfected associations with machinery for detective service and boycotting. Such an association agrees upon a schedule of prices and leaves to each member the adjustment of output to his possible sales at those prices. These are usually higher than the former competitive prices; the public is unable to purchase as largely as before. Consequently each member must restrict his output by working shorter time or by reducing force, until the market takes off the surplus. Such associations sometimes adopt methods designed to restrict the number of members, to boycott those who cut prices, to enter into arrangements with material men to deprive them of material, or with trade unions to deprive them of workmen. These methods and arrangements indirectly reduce the output of the industry. If they are not adequate the association may go to pieces or be reorganized on the basis of restricting output directly, and that has been the history of several associations noted in this report.

The first of these price agreements is that of manufacturers of staple products which are open to free competition. Associations in these industries, such as the various iron conferences which preceded the organization of the trusts, have usually broken down, owing to their inability to prevent the incoming of competitors and to hold their members to the schedule of prices.

Another class of agreements is found in associations of manufacturers of proprietary products, such as are controlled by patent rights, copyrights, or trade-marks. In these there is usually no agreement on prices; rather is there an agreement to protect the prices of each proprietor. The third class of agreements is that on lump contracts, where competitors agree among themselves on the bids to be submitted for work.

Different from these associations, designed merely to fix prices, are those which are designed directly to restrict output by determining first the amount which the market will absorb at the price to be established, and then by apportioning this output to the several establishments. The lack of adequate authority over members, due to unfavorable decisions by the courts, has caused various of these associations to reorganize under the form of the so-called "trust" or consolidated corporation. The regulation and restriction of output by trusts is effected by various methods.

Some of the wise things that men have said seem so simple that a fellow actually gets mad to think that he didn't think of them himself.

WORCESTER BOARD OF TRADE.

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The Worcester Board of Trade wants to keep on file at the Secretary's office a complete list of places where floor space can be secured for manufacturing and business purposes. There are calls made every day for such information. The Secretary would appreciate it if every owner of a building in Worcester used for manufacturing or mercantile business would furnish particulars of what he has for renting purposes, and if land-owners would also file a list of available building sites. State owner, location, whether store or factory, amount of floor space, amount of power available and approximate rental. If it is land for manufacturing purposes, state owner, location, number of square feet, general dimensions, any building thereon; if so, give floor space, number stories, brick or wood, power plant with horse power, and purposes last used. Also give name of railroad near it and side-track facilities. Give price that can be used as basis of negotiation.

This information is for the use of the Secretary, and is not to be used for any purpose except to locate new or present business interests. No compensation is to be asked for any lease or rental that may be brought about by the Board of Trade.

The Board of Directors met Thursday, October 12, and discussed matters before them. The Boutell bill providing for free alcohol for use in manufacturing and arts, was endorsed on recommendation of the Committee on Legislation.

President H. W. Goddard was named as representative of the Board of Trade for member of the Executive Committee of the State Board of Trade.

Mr. Clellan Waldo Fisher was appointed on the special committee on Union Station and grade crossing matters, to take the place of Mr. M. J. Whittall, who could not serve.

Historical: The Worcester turnpike was opened in 1808.

J. W. Bishop Co. has the contract for a five story addition to the Grand Street plant of the Crompton & Knowles Loom Works. The addition will be 150 x 60 feet and will be of brick.

The annual meeting of the Worcester Merchants' Association was held Tuesday night, October 10, in Board of Trade Hall, and was followed by an address to the members by ex-Mayor Rufus B. Dodge, who spoke along the line of trade conditions and of the stifling of competition either by legislative or other methods.

In his remarks he arraigned somewhat severely the Massachusetts Legislature, saying that while he had always believed that the Massachusetts Legislature was progressive, its members had often permitted bad legislation to go through without honest and effective opposition, because they feared the influences at work

in behalf of the legislation. As an instance of this, he cited the leasing of the Boston & Albany Railroad to the New York Central & Hudson River Railroad as a thing that should never have been permitted. He also opposed, most vigorously, the policy of the Legislature in permitting steam roads to acquire by purchase or otherwise competing trolley lines, saying that the time would come within ten years, and probably within five years, when the nickel that was paid for car fare, whether upon the steam road or the electric road, would find its way into the same till.

The meeting was called to order at 8 o'clock by President Charles H. Pinkham, with about twenty-five members of the association present. The meeting proceeded at once to the routine annual business, consisting of the presentation of the annual reports. These were made by President Charles H. Pinkham; I. Swan Brown, for the Committee on Grievances; W. W. Johnson, for the Committee on Legislation.

All of the reports presented showed that the organization had enjoyed a prosperous year and that much effective work had been done.

These directors were elected for a term of three years: F. A. Hawes, A. A. Spaulding, M. D. Gilman, E. E. Dodge, Elwood Adams and Moses Gilman. The directors will meet in the course of a few weeks for organization and the election of a president. Following the address of ex-Mayor Dodge, a vote of thanks was extended to the speaker and to the retiring officers, after which the members adjourned to the rooms below, where a luncheon was served.

The business of the Atlas Foundry and Machine Company of Newark, N. J., has been acquired by the Curtis & Marble Company of Worcester, which is to be moved to Worcester, adding to one of the city's important industries. The Curtis & Marble Company will become the manufacturers of the Atlas and Parkhurst pickers and various lines of Atlas preparatory machinery. With this added equipment, the company will be able to furnish preparatory and finishing machinery to suit all requirements. The machinery needed for this work will all be installed at the Worcester plant, which is now very busy on special machinery as well as the regular lines. The Curtis & Marble Company has purchased all the patterns and special machinery used by the Miller Press and Machine Company, Woonsocket, R. I., in manufacturing the Miller flexible bed press, and will be ready in a short time to fill orders for the above machine or any of its parts, or for jackets for the presses formerly made by the Miller company. With this acquisition, the Curtis & Marble Company will be able to turn out presses to satisfy the needs of textile manufacturers of all clases, as it is already the maker of the Ernest Gessner double-bed rotary cloth press.

The Whitcomb-Blaisdell Machine Tool Co. of Worcester has acquired the property of the Draper Machine Tool Company, whose plant at 130 Gold Street adjoins that of the Whitcomb Manufacturing Company, now controlled by the Whitcomb-Blaisdell combination.

In the transfer of the property the Draper Machine Tool Company was represented by J. W. Carel of Springfield, president, and Charles E. Thwing of Worcester, treasurer, the two controlling jointly and equally the capital stock of $90,000. President Carel will retire permanently from the business, but Mr. Thwing, under the conditions of the sale, will become identified with the Whitcomb-Blaisdell Company in an important capacity. Both of these men made transfer of their entire holdings of the stock.

The Draper Machine Tool Company property is one of the best equipped manufacturing plants in Worcester, consisting of a new shop, fully equipped for business, and about 25,000 square feet of land. The accession of this property will very materially increase the capacity of the Whitcomb-Blaisdell Machine Tool Company in conducting its business. Although not always conducting its business under the corporate title of the Draper Machine Tool Company, the business is one of the oldest manufacturing plants in Worcester, and has been in existence upward of sixty years.

The business was started in 1845 as J. C. Coombs & Company, carrying that title until early in the 50's, when it became known as Shepard, Lathe & Company. In 1861 Mr. Shepard, the senior member of the firm, withdrew and another change of name was made in 1861, the business then being conducted as Lathe & Morse of Worcester. Later, with practically the same interests in control, the title was changed to the Lathe & Morse Tool Company, business being done under that name until 1892, when the present Draper Machine Tool Company was organized, the name being adopted because of the fact that Gen. W. F. Draper of Hopedale was at that time one of the principal stockholders.

The Draper Machine Tool Company has made a specialty of the construction of lathes, and under the new management there will be no radical changes.

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Magazine and Municipal Comment.
Hon. Stephen Salisbury.
The Billboard Nuisance.
Development of Water Supply.
Board of Trade Notes.

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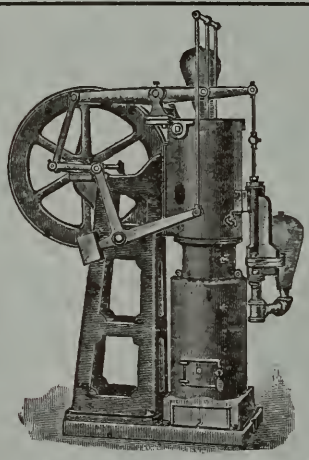

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WORCESTER, MASSACHUSETTS

HON. STEPHEN SALISBURY

The Worcester Magazine.

VOL. VIII. DECEMBER, 1905. NO. 12.

This magazine is published by the Worcester Board of Trade. Its reading pages are devoted solely to municipal development, good citizenship and the business welfare of Worcester. Space in these pages is not for sale.

MAGAZINE AND MUNICIPAL COMMENT.

Hon. Stephen Salisbury

Hon. Stephen Salisbury, public benefactor, philanthropist and foremost citizen of Worcester, is dead. This great loss the city has sustained is not yet fully realized. The city has not yet recovered from the shock which always comes when one of its best beloved citizens is taken. He has been called the greatest educator of the city, because he has for many years given so liberally from his vast resource of wealth to educational institutions. The appeal to him in the name of charity has ever struck a responsive chord, and hospitals, homes for the aged, the orphan and the friendless have been maintained in a certain degree from his wealth.

At a special meeting of the directors of Worcester Board of Trade, Hon. Rufus B. Dodge presented the following tribute to Mr. Salisbury as the expression of the directors of the Board, of which he formerly was a member:

"The largest benevolence, the kindliest charity and the deepest interest in the public welfare characterized the life of Stephen Salisbury.

"His loyalty to Worcester was unmatched, his generosity boundless.

"His heart contained no hint of selfishness.

"Had he held the absolute destiny of his fellows, no misery would have cast even a shadow into a single life.

"He felt toward others as Christ felt —no anger, no malice, not even reproach.

"Words cannot do justice to his broad and kindly nature.

"Even as he cherished no evil thought toward any, none ever regarded him with anything but the most perfect respect and good will.

"Public confidence in Mr. Salisbury was unbounded. Filling many positions of trust and honor, the people would have gladly given him more if he would have accepted.

"The community was ready at any time to place before him anything within its gift.

"No man has lived more beloved alike by the greatest and the humblest.

"At such a death all voices hush, all heads are bowed.

"Of few can it be said: 'His place will be forever vacant.'

"Among those few names his has a place. We shall never see his like again. No human balance can weigh his worth, but, as his presence fades from earth, we stand stunned and awed in con-

templation of a loss the extent of which we cannot measure.

"The Board of Trade joins with the whole city in a universal tribute to a life supreme in usefulness.

"The name of Salisbury carried with it honor which dies not with the body, but continues defiant of time, undimmed and ever remembered."

For Village Improvement Work

The fall meeting of the Massachusetts conference for town and village betterment was in Greendale the latter part of November, and brought out several prominent Massachusetts men who are working for civic improvement. The main thing that seemed to be shown by its deliberations was that it should be more comprehensive and representative than it is. According to the report of the secretary and treasurer, there are 190 village improvement societies in the State, but of these only twenty-nine belong to the conference. But there are many allied societies in addition, aiming at civic improvement and having certain interests in common with the others. Taking the total of these, village improvement societies, arts and crafts societies, educational societies, women's clubs doing betterment work, boys' and girls' clubs, charity societies, library clubs, old home week organizations and granges—the number foots up 877.

This is an average of about two and a half to every city and town in the State, though it bears a smaller ratio to the number of villages. Still, it would seem, if all these organizations lived up to their names and pretensions, as though they ought to be able to work a transformation in social conditions and in public taste and the improvement of natural and undirected arrangement. The women's clubs, for betterment work, alone number more than a quarter of the whole, and it would be difficult to find a society having general civic and social improvement for its object in which the women were not prominent and generally the more enthusiastic factors. Could all these societies be affiliated through a general federation, it would be likely to have an arousing effect upon the public spirit of a great many communities in this State. Such a step would diffuse knowledge and awaken a wholesome and fruitful spirit of emulation. As one of the speakers at this conference said concerning the work of civic betterment: "There is only one virtue, enthusiasm; and only one vice, inertia."

Any alert, intelligent and progressive village improvement society is a missionary source and centre. Its influence will soon be seen to advance beyond its immediate jurisdiction. It is ultimately reflected in the outskirts, and it passes from neighbor to neighbor until the benevolent germs of betterment have found lodgment in a whole township. The effect is then seen not only in buildings, streets, grounds and tree and flower arrangement, but it extends to the very quality of those whom the people select to look after their affairs.

Takes Well in Indiana

The following letter from the New Albany, Ind., Commercial Club, commenting on the Worcester Magazine, is reproduced in these pages because some suggestions are made in connection with the article on "More Rapid Counting of Votes." The voting machine is suggested as the remedy. Worcester has thoroughly gone over that proposition, and machine voting is not in favor. The letter follows:

"Dear Sir:

"Permit me to thank you and the Worcester Board of Trade for your Magazine sent to the New Albany Commercial Club. Its handsome typographical appearance is only surpassed by the variety and character of its contents.

"While the Magazine is necessarily mainly in the interest of Worcester, its 'Magazine and Municipal Comment' touches in a brief, pertinent and timely manner many points of general interest. The longer articles are in good taste and well written and not too long, and usually point in the right direction, therefore I was somewhat surprised by the proposed solution of the 'More Rapid Counting of Ballots,' published in the November number.

"The English system there described is certainly much superior to the one in

general use in the United States, but it will not compare for an instant with machine voting. Any of a dozen styles of voting machines now in actual use will give a complete and accurate account of the votes in Worcester within an hour from the time the polls are closed.

"Yours truly,
"Geo. B. Cardwill, Sec'y."

Food Hints from Railroad Man

The social side of Board of Trade life is now on and will continue through the winter and early spring months. The Committee on Meetings and Receptions is planning attractive features, and made an excellent start in securing for the November talk, Mr. E. G. Connette, the general manager of the Worcester Consolidated Street Railway. Mr. Connette is one of the best known authorities on street railway matters in the country; a man of broad, liberal ideas. He came to Worcester from Syracuse, where he was general manager of the street railway system in that important city. He has served on various New York state commissions, and Worcester is fortunate in securing so representative a street railway man for its system. The smoketalk was in the nature of an informal reception for Mr. Connette, who is a member of the Worcester Board of Trade. The subject selected for the talk was "Evolution of Transportation Methods." While he gave a most interesting talk on street railway matters, he gave a valuable pointer to Worcester business men in his talk about street railways doing an express business. This would mean a great increase in the Worcester wholesale business, it being the centre of one of the best purchasing communities in New England.

This particular smoketalk was in charge of Mr. George F. Booth, chairman of the Committee on Meetings and Receptions, and Mr. W. H. Coughlin. Good music was furnished by the Board of Trade Glee Club and a lunch was spread.

The next smoketalk is January 18th, and is in charge of Mr. A. O. Young, Mr. James Draper and Mr. W. W. Johnson. The talk for February 15th is in charge of Mr. H. E. Townsend, Mr. C. F. Marble and Mr. Freeman Brown, and March 15th the programme is in charge of Hon. W. A. Lytle, Mr. A. C. Comins and Gen. R. H. Chamberlain.

Worcester's Water Census

The water census recently compiled shows Worcester to have a population of 132,516, and this is generally believed to be a fair figure. It is an increase of nearly 5000 over the figures of the State Census Bureau, and it is a fact that the Water Department has opportunity for the most accurate figures. This increase is 14,000 in the last five years, which is in proportion to the average gain of 3000 a year Worcester has made in the past twenty-five years.

Chief among the interesting facts is the dwindling of the vacant tenements in Worcester, and the phenomenal growth of the east side. As a result of the investigation by his department, Registrar George C. Hunt says he is confident that Worcester's great growth the past year has been in the section between the east line of Lincoln Square and the east line of Main Street at New Worcester. Fully 72 per cent. of Worcester's increase in population during the past twelve months has been on this side.

He also ascertained that there were almost 600 less vacant tenements in Worcester to-day than one year ago.

The water census figures coincide with the curve of population, which was long ago plotted by City Engineer Frederick A. McClure. His line, which is based on the increase in past years, when the census has been taken, showed there should have been in Worcester, May 1, very close to 132,300 inhabitants.

Water Supply Development

The City Council has asked City Engineer Frederick A. McClure for an estimate of the cost of development of the city's water supply source. He has answered the request and names $614,000 as approximately the amount necessary for complete development. The reply of Engineer McClure is given in the Magazine, as the question is one of the most important that now faces

the tax payers. Referring to Tatnuck Brook, Mr. McClure says:

"I believe if additional storage is to be provided on Tatnuck Brook, that the better course to pursue is to carry it to the limit. Every gallon of such a reservoir is needed to-day, with sufficient drainage area behind it to keep it in a state of effectiveness.

"With the reservoir raised as here suggested, and with efficient management, all the water of ordinary years could be caught and utilized, and with the Asnebumskit Brook to draw upon in the years of diminished rainfall, any surplus of storage at such times would be of decided value. As I have stated elsewhere, such a reservoir is liable to be below high-water mark for several succeeding years, but its advantage would be appreciated with a recurrence of the precipitation of the years just past. A fact with which you are well acquainted, but one I wish to emphasize, is the liability of succeeding years of low precipitation, when if all the water were caught, it would not be sufficient to supply the present demand upon this stream."

The Billboard Nuisance

During the Massachusetts conference for town and village betterment in Greendale, the latter part of October, Mr. Henry Lewis Johnson, editor of "Printing Art," gave a talk on "The Billboard Nuisance and How to Fight It." Within the past year a sentiment has developed throughout New England directed against billboard advertising. Parkways, public squares, with carefully planned perspectives and attractive settings of foliage, are subject to the invasion of the clamorous billboard. Compared with some New England cities, Worcester may be said to be comparatively free from the most objectionable forms of billboard advertising. On some patches of vacant land in residential sections of the city, billboards have been erected, but neighborhood sentiment created sufficient opposition to remove them. It is the growth of the so-called nuisance that calls up at this time the general agitation. The advertiser and the bill poster want the billboard, and very naturally so, and the public, from local and civic pride, want it removed, and the day of reckoning has dawned. It is not so much the billboard that arouses indignation as the occasional sign or flagrant disregard for all decency displayed. It is recognized that this is an age of advertising, but it is not necessary to mar the beauty of any section by a series of billboards covered with flashy patent medicine pictures, shoe advertisements or theatrical attractions.

Worcester as an Art Centre

The princely bequest from the late Stephen Salisbury to the Worcester Art Museum will make that institution the important and powerful agency for æsthetic enlightenment that it should be. The Worcester Museum had already—thanks mainly to Mr. Salisbury's generosity—been able to establish a high reputation, and to do extremely valuable work in the interest of the fine arts; its opportunities to develop and carry forward this work will now be vastly enlarged, and, under the direction of its excellent board of trustees and its zealous and broad-minded director, there is every reason to expect that it will be able to accomplish, in a fitting manner, all that a public art museum should stand for in the life of an American community. These gifts to Worcester will go far towards making the city a little capital. It has one university and two colleges, libraries, antiquarian and historical collections, a museum of natural history. It is an educational and industrial centre, sufficient unto itself for its future. Withal it is a handsome city, with a fine residential section, while its general aspect is that of thrift. The second city in Massachusetts and the third in New England in point of population, Worcester bids fair to be more than ever a place of light and leading. As Worcester people all work for Worcester, they are not likely to let its light be hidden under any quantity of bushels.—*Boston Transcript.*

The widening of Shrewsbury Street is already under way. That section

Boulevard, Then Bridge

between Adams and Belmont Streets is the first to be worked and will cost in the neighborhood of $30,000. The City Council has made provision by ordering a loan for this amount and considerable progress has been made. With this section completed the street from Adams Street to the Lake will be of good width. This again brings up the question of a bridge and the work is a few steps nearer the accomplishment of this most needed improvement. It is only a question of time when the Lake will be spanned by a bridge. It must come. During the meetings and conferences of the association that was working for a bridge at the Lake, Hon. Stephen Salisbury was an enthusiastic participant. Had the committee completed the detail of its work sufficiently to have presented the public the plan of a bridge and shown by activity that their determination was to bring about this improvement, it is believed that Mr. Salisbury would have been a liberal contributor to such a subscription. If Worcester is to open a boulevard from the gateway of its city to the Shrewsbury line and bring its beautiful Lake resort into more prominence, the bridge must become an accomplished fact. An opportunity for some public spirited citizen to start it a-going is presented. After the boulevard, then the bridge.

Two Public Benefits

Within the past month Worcester has taken on an addition to its park system which more than doubles its acreage previously held. It has also added to its business ventures by completing arrangements for a cold storage house. The identity of the old steel works is lost with the erection of this building for cold storage purposes, upon which work has already commenced.

It is generally accepted by the people that the purchase of Green Hill estate for public park was wise. While it is not the ambition of Worcester to lead New England cities in park acreage, it is the tendency of all cities to provide for the people as much park space as possible without crippling the city financially. The offer of Green Hill estate was such that it seemed a pity to reject it. Although assessed for 500 acres it is probably nearer 700 acres, which gives the city more than 1200 acres of public park land.

For years there has been a demand for a cold storage house in Worcester. It has been necessary for some of the wholesalers to keep goods in storage in Boston. The erection of a building of this kind will undoubtedly prove a good investment. It is of sufficient capacity to accommodate every Worcester wholesaler and will unquestionably be used by wholesalers and merchants throughout this section of the county. The park and the storehouse are but two of a series of public benefits that have come to Worcester within a month.

Organs of Commercial Organization

Trade organizations all over the country are adopting the idea of issuing regularly a publication to tell of the work being done and to chronicle the happenings in the business world for the benefit of the public at large as well as for the members. These publications are in no sense competitors of the local newspapers, but, on the contrary, appeal to an entirely different clientage. While it is probable that the business changes, new industries and advantages of the place are generally told of in the daily press, it remains for the trade paper to collect all the information of this class and present it once each month to its members and those who are seeking information as to the place. The paper circulates not only among the business men of the city in which it is published, but among those of all the neighboring towns, and hundreds of copies are sent to the North and East in response to special request or to those who are seeking information about the section. Only a fraction of this class would be reached by the daily newspapers, and much of the information on industrial topics in the newspapers fails entirely to impress the reader, so great a quantity of the general news of the day being published as to completely overshadow it. The organ of commercial organizations goes to business men, manufacturers and home-seekers and is

read carefully from month to month. For this reason it is especially adapted to the wants of the manufacturer looking for customers, the jobber wishing to get his name before the people of neighboring towns, the commission man and the general merchant.

Is Two Cents Wasted?

When you buy a ten-cent special delivery stamp of the United States Post Office and affix it to a letter already bearing a two-cent stamp, you virtually pay for two deliveries—regular and special. Such a letter is given to a special messenger at any post office in the country and hurried to the addressee. If the latter is in his office or home, and can give a receipt, all is well. But if he happens to be out, no inducement will lead the special messenger to deliver such a letter through the slot in his office door. Instead, a notification slip is dropped, the letter returned to the post office and delivered by the next regular mail. If a special delivery letter is forwarded on Saturday afternoon, and the addressee happens to be out momentarily, he must wait until Monday morning for his letter, unless he wishes to make a personal trip to the post office for it. In other words, under certain circumstances, when you pay Uncle Sam twice for delivering a letter, at a rate that would insure the delivery of seven regular letters, he doesn't deliver it at all, but takes it back to the post office and thinks it over.—*Printer's Ink.*

Trade Unions Against Plan

The commission appointed to give hearings and make report upon the proposition to establish trade schools in various portions of the State has not been deeply impressed thus far by the practical value of the views that have been expressed before it, yet in the opportunities that have been given the affirmative side of the question, considerable interest has been developed, and if the suggestions that have been offered have been somewhat vague and scattering, they have, at least, shown that the weight of general opinion, especially among educators, is favorable to the main idea. Now, the representatives of labor have been given their innings. They are opposed to the scheme so far as they are able to give definite reasons for that opposition, even if they do not seem to be very good ones.

The unions oppose teaching trades to those who do not understand them so that there may be a short cut whereby masses of labor may be quickly turned into any one industry. They believe that their own skill which they have developed by years of toil should not lose its value. They are jealous of the places where trades are taught, though they do not object to the extension of knowledge or instruction in principles.

A newspaper says: "The only inference to be drawn from the position that labor has taken on this matter seems to be that those now in the trades have spent the best years of their lives in acquiring their skill, and that therefore the generation now coming forward should do as they have done, and be compelled to spend half their lives in picking up the facility that might be gained in a fifth of the time by systematic training. Mr. Foster spoke of half-trained men from the schools entering the trades to take the places of skilled workmen. A half-trained man never has been and never will be a menace in the industrial world, to the fully trained one, at least in the long run. If this country is going to hold its own with other countries in technical skill and manual training, it must do so by some other means than the limited opportunities that the labor organizations permit the young aspirants for a place in the industrial world to enjoy."

HONORABLE STEPHEN SALISBURY.

THE life of Hon. Stephen Salisbury was one of liberal giving to education and charity. Possessed of an inherited fortune, he had added to it during the year following his father's death, by careful business investments, and devoted the income to promote education and relieve the wants of the needy. To him Worcester's educational institutions, hospitals, charitable organizations owe a great deal. It was portions of his wealth that enabled them to carry out wisely made policies. He was a public benefactor in every sense of the word. His death is a distinct loss to Worcester. He was the last of a family which has done as much to build up this city on educational lines as any name that can be mentioned. The Worcester Polytechnic Institute stands as a memorial to the name of Salisbury. There is a Salisbury ward in its hospitals. The most beautiful cultivated park of Worcester's great system was the gift of Mr. Salisbury, and now the Worcester Art Museum, the outgrowth of his ideas and liberal donations, is to be his monument. Of his great wealth this institution is to receive under the will a large proportion, to be used for the development of art and make a public art museum all it should stand for in the life of an American community. Giving liberally during his long lifetime to institutions whose sole aim is to do an educational and charitable work, he closed his life by providing for Worcester's education along the æsthetic lines of art.

In one way or another Mr. Salisbury had befriended many thousands of Worcester's people. It was done in the most simple and unostentatious way, in keeping with his whole life, which was modest, retiring and unpretentious. He touched elbows with the common people every day, and had a smile and pleasant word for everybody. He was a gentle, considerate, charitable, even-tempered gentleman.

Rev. A. S. Garver, pastor of Mr. Salisbury's church, knew the man intimately, his characteristics, his methods of charity, his life detail. His estimate of the worth of the man is here given:

"There was no worthy cause of whatever name or kind which did not receive his sympathy and support. That an institution was needed, and needed him, was enough. His ear was ever open to its plea, and his response was never slow. In his public capacity, he filled a large place; his relations to the educational, literary, benevolent, religious institutions of the city, show how high were his leading interests.

"But our thought comes back from the positions he filled so honorably, and the noble services he rendered, to the man himself. I cannot, especially in these first hours of loss, speak adequately of one so near and so revered. Indeed, it will be difficult for any one to give a just estimate of a character so quiet and retiring in its manifestations, and yet so deep in its sources.

"Mr. Salisbury was a man of strong convictions, and at the same time no one was more considerate of the opinions of others. In the important enterprises he helped to direct, and in which his judgment had great weight, he was always ready to acquiesce in the collective wisdom of his associates. In none of the relations of life, social and civil, did he ever assume airs of consequence or authority. Such suggestions apparently never found a lodging-place in his mind. They were opposed by every deepest instinct in him. So true was the balance of his nature that he never claimed anything for himself. He was loaded with honors, but he bore them all lightly and meekly. There was in him that element of modesty, without any weak self-depreciation, which is seen only in the noblest natures and along with this, the inbred courtesy which is the distinguishing characteristic of the true gentleman.

"His whole career, public and private,

was directed by a commanding sense of obligation. It was the habit of his mind to look at things seriously. He seemed to feel that much was expected of him, and we know how nobly he met that expectation. Therefore, he was willing to assume burdens of responsibility in the direction of large affairs, which left him small margins of freedom from care. He lived a laborious and exhausting life, never sparing himself in time or thought; no one brought a more conscientious and faithful mind to the discharge of duty.

"And yet, how quietly he bore these anxieties and cares. His thoughtfulness in the midst of it all, was one of the most beautiful traits of his character. He was never too busy to attend the church he loved, as regularly as Sunday came. He never was so absorbed that he forgot the kind and gracious work. He had leisure for all gentle and thoughtful deeds of love and sympathy; for those simple remembrances and personal attentions prompted only by his generous and affectionate nature.

"As we reflect now on what he has done, and what he was, we shall realize as never before how great a man he was, and how large a place he has filled in the community. In his public spirit, in the breadth of his sympathies, in his wish to make his life count for the good of 'all the people,' he was the type of the great citizen. In its devotion to high ideals, in its fidelity to lowly duty, in its simplicity, his was a great character. In his personal bearing, and knightly spirit, in his culture and courtesy, he 'bore without abuse the grand old name of gentleman.'"

Mr. Salisbury was born March 31, 1835, in the building at Lincoln Square now occupied by the Hancock Club. He died in the Salisbury mansion on Highland Street, November 16, 1905. His father and grandfather before him bore the name of Stephen Salisbury. Educated in private and public schools, he entered Harvard University and was graduated at the age of 21, in the class of 1856. He completed his literary education in Berlin and Paris, and for several years after he traveled in Europe. Returning to Worcester he took up the study of law in the office of Dewey & Williams, and was graduated from the Harvard Law School and admitted to the Worcester County Bar in 1861. The following two years were passed in Mexico and Yucatan, where he became interested in a line of research and secured many antiquities which are now owned by the American Antiquarian Society, of which he was for many years president. Returning to Worcester, his first business connection was as a director of the State Mutual Life Assurance Company, then in its infancy, he representing his father's interest in the concern. He was afterward made a director of the Worcester National Bank, and succeeded his father as its president in 1884, an office he held to the time of his death. He afterwards became interested in a financial way with the Worcester County Institution for Savings, being for many years its president, succeeding Hon. Alexander H. Bullock; and was a director of the Worcester Trust Company, holding a number of shares of stock in that institution. In subsequent years he became associated with many institutions and organizations in which he held important offices and large holdings of stock—railroad, bank and manufacturing. He also had the welfare of Worcester's manufacturing interests at heart and had assisted financially in the earlier days of their inception. In spite of his many and varied financial interests, Mr. Salisbury always found time to give a great deal of his attention, as well as substantial financial contributions, to Worcester's educational institutions. Few if any of them with which Mr. Salisbury was identified during his life were nearer or dearer to him than the Worcester Polytechnic Institute. The last gift he made during his lifetime was a donation of $100,000 to the endowed fund of the Institute. He had given in previous years considerable of his wealth for the development of this noted school of learning, and it is unquestionably to him more than to any other man that it has been possible for the Worcester Polytechnic Institute to reach its present position in the educational

world. As a memorial to his father the Salisbury Laboratory was constructed at a cost of $100,000, and he has made liberal contributions, the income of which is to the benefit of the pupils. He was vice-president of the trustees of Clark University, and upon the death of Senator George F. Hoar, who was president, Mr. Salisbury was invited to take the vacant office, but declined. He was president of the American Antiquarian Society, his father giving the land for the site it now occupies, and supplemented that gift with a contribution of $5000 to the building fund. It is this society which Mr. Salisbury so liberally remembers in his will. His principal gifts during his lifetime are: Laboratory and Electrical Station for the Worcester Polytechnic Institute; land and contribution for building for Worcester Society of Antiquity; land for the Worcester Art Museum and money to endow the corporation, in addition to a contribution for the building; Institute Park, comprising eighteen acres, to the city; land for the site of the Worcester Woman's Club; built a gateway of rough stone on Bancroft Hill, and threw open the surrounding land known as Bancroft Park and Oak Grove to the public.

In politics he was a Republican. He was a member of the Worcester Common Council in 1863, 1864 and 1865, being president of that branch of the City Council in 1865. He was a member of the Massachusetts State Senate, 1893, 1894 and 1895, being chairman of the Committee on Education and on Banks and Banking during those years. At the time of his death he was connected with the following institutions:

Commissioner of city's sinking funds.

Director of Associated Charities.

Director of Bay State House Corporation.

Director of Boston & Albany Railroad.

Director of Norwich & Worcester Railroad.

Director of Cold Storage Company.

Director of New England Telephone and Telegraph Company.

Director of State Mutual Life Assurance Company.

Director of United States Corset Company.

Director of Worcester Art Society.

Director of Worcester Museum.

Director of Worcester Consolidated Street Railway Company.

Director of Worcester Electric Light Company.

Director of Worcester Gas Light Company.

Director of Worcester and Holden Street Railway Company.

Director of Worcester Trust Company.

Honorary member of Worcester Republican Club.

Member of American Archæological Society.

Member of American Geographical Society.

Member of Board of Advisers, Worcester Children's Friend Society.

Member Society Conservatorio Yucataco.

Member Committee on Library and Semitic Languages, Harvard College.

Member Executive Committee, Economic Club.

Member First Unitarian Church.

Member Hancock Club.

Member Harvard Club of Worcester.

Member Massachusetts Historical Society.

Member Massachusetts Geographical Society.

Member New England Historic Genealogical Society.

Member New England Agricultural Society.

Member Natural History Society.

Member Shakespeare Club.

Member the Sociedad Mexicana de Geographia y Estadistica.

Member University Club of Boston.

Member Quinsigamond Boat Club.

Member Worcester Agricultural Society.

Member Worcester Board of Trade.

Member Worcester County Bar.

Member Worcester County Horticultural Society.

Member Worcester Club.

Member Worcester Fire Society.

Member Worcester Society of Antiquity.

President St. Wulstan Society.

President American Antiquarian Association.

President Worcester National Bank.

Trustee Clark University.

Trustee Leicester Academy.

Trustee Memorial Hospital.

Trustee Peabody Museum of Cambridge.

Trustee Worcester County Institution for Savings.

Trustee Worcester Polytechnic Institute Corporation.

Trustee Worcester Railways and Investment Company.

Trustee Worcester Theatre Corporation.

Vice-president Home for Aged Men.

Vice-president Rufus Putnam Home Memorial Association.

Vice-president St. Vincent's Hospital Trustees.

The value of his estate is not definitely known. He possessed large holdings in banking, railroad and manufacturing concerns amounting to more than $1,000,000; was a large real estate holder, and paid to the city and State an immense tax. Conservatively estimated his wealth comes inside $5,000,000. His will was filed for probate November 20th. After making several bequests of a personal nature, his public bequests are as follows:

The Worcester Art Museum is named as residuary legatee after his special requests. This is estimated at about $3,000,000.

To the American Antiquarian Society, the estate at Lincoln Square known as the Salisbury mansion estate, valued at $50,000.

To the American Antiquarian Society, his library and his books and $200,000.

To the residuary legatee he leaves his estate bounded by Highland, Lancaster, Salisbury Streets and Institute Road, together with all the works of art, furniture, silver and other contents of the mansion not otherwise provided for. He suggests, but does not direct, that the mansion be moved to some site to be selected by the executors and that Harvard and Tuckerman Streets be connected by a public street through his ground.

To Worcester Polytechnic Institute, $200,000.

To Massachusetts Historical Society of Boston, $5000.

To Harvard College Library, $5000.

To Worcester Mechanics Association, $5000.

To Worcester Firemen's Relief Association, $5000.

To Worcester Natural History Society, $5000.

To American Unitarian Association of Boston, $5000.

To Second Parish of Worcester, $5000.

To Home for Aged Women, Worcester, $5000.

To Old Men's Home in Worcester, $5000.

To Children's Friend Society of Worcester, $5000.

To the Worcester Natural History Society, the lot of land north of Central Church on Salisbury Street, valued at $15,000.

To Worcester Society of Antiquity, lot in the rear of its property on Salisbury Street, and $5000.

Mr. Lyman A. Ely, Mr. Francis H. Dewey and Mr. James P. Hamilton are named as executors of the will.

THE BILLBOARD NUISANCE, AND METHODS OF FIGHTING IT.

LOCAL improvement work has to contend with but one solitary form of organized opposition—billboard advertising. There is hardly a community which does not have some organization or group of public spirited citizens which seeks to remove detrimental features and to make improvements. The greater the improvements, the more eagerly are billboard locations sought. Parkways, public squares, with carefully planned perspectives and rich settings of foliage, are subject to the invasion of the clamorous billboard.

While we meet as a comparatively small group to gain suggestion and help in carrying on local improvement work, how to overcome the billboard nuisance is a matter of serious importance, not only to us in our State, but throughout the length and breadth of our land.

There are but two divisions to be made of those concerned. The aggressive party is the advertiser and his agent, the bill poster, who go up and down the land erecting billboards and casting their blight like a pestilence, yet without check or hindrance. The meek and long suffering public is the second party, and from all local and civic improvement organizations are to come protest and action for the correction of this evil. The day of reckoning has come. In many localities, a particularly obnoxious sign or some flagrant disregard for all decency has brought to the surface the revulsion of feeling which makes such forms of advertising an injury instead of a benefit to the advertiser.

To fortify ourselves properly to grapple with the situation, we must take into account the purposes and methods of billboard advertising, together with the latest information as to its status. We must recognize that advertising in its broadest sense is the mighty dynamic power by which great business enterprises are built up and maintained. For our purpose, we can readily classify it under three general headings:

First. Catalogues, circulars and other special announcements.

Second. Advertisements printed in newspapers and magazines.

Third. Placards, painted signs or billboards, which may be called outdoor advertising.

Whether we come in contact with either of the first two classes is largely a matter of our own control. To all actively engaged in business or concerned with developments and progress in any manufactures, sciences, arts or professions, announcements, catalogues and advertisements are in the nature of a necessity in order to maintain a close touch and insight into any special industry. Gladstone is credited with having said that he read carefully all of the advertising pages of American magazines as the basis of his knowledge regarding the industrial progress of this country.

If advertising is so important, even essential to business enterprises, how can we justify our effort to curtail it by opposing the billboard? Owing to the somewhat permanent nature of billboards, especially the large ones upon which glaring signs are painted, the purpose of such advertisements is generally to give prominence to either a firm name or some product. The efficacy of billboard advertising is regarded as being in the impression which it makes upon the observer's eye and mind. The head of one of the large billboard firms calls billboard signs "The branding irons of publicity." Distributed as they are throughout the suburbs and open country, may they not also be likened to the hawkers who trespass upon our hearing and often upon premises where they are unwelcome? Billboard advertising is, therefore, mainly for the purpose of exploiting identity of a single

manufactured product, rather than for general business announcements such as we find in newspaper and magazine advertising.

The recent report of the American Scenic and Historic Preservation Society gives some interesting facts obtained by inquiry of fourteen of the largest advertisers in the United States—firms who are supposed to spend from $200,000 to $1,000,000 a year for publicity. While several of these concerns use billboard advertising, the tendency appears to be to reduce it. One company whose advertising bills amount to $800,000 reports "outdoor advertising is not profitable compared with other forms, unless we want to impress the name of an article on the people's minds." A company which devotes nearly $1,000,000 a year to advertising, spends nothing out of doors in the United States or Canada, but from one-third to one-half of its allotment to Cuba in that fashion, on the theory that the people there are largely illiterate and can be reached in no other way. The general manager of a large concern reports that after experience he has stopped out-of-door advertising, and adds: "Perhaps in some new country or with a new product, it might be profitable, but I would rather doubt it."

Advertising is far from being an exact science. An experienced advertiser rarely ventures to say definitely what pays and what does not pay. So far as billboard advertising is concerned, the advertiser must realize that the abuse of it has aroused such feeling that billboards no longer add to his reputation, but are simply obnoxious notoriety. Aside from these practical phases by which billboards have lost their efficiency, and in fact are, in all enlightened communities, boomerangs, the rights of the matter are not properly and fully understood. The advertiser upon the billboard defends his glaring and blighting imposition by claiming that rent is paid for the land or location and that every man has a right to do as he pleases with his property. That billboards are indeed a nuisance and an outrage upon the public, are universally conceded. It is almost impossible to suggest the matter to anyone riding upon the trains or living in the suburbs who is not at once aroused to the indignities with which he is familiar.

I believe that an investigation will show that a considerable percentage of billboard advertising is vandalism and trespass, in fact as well as in principle. This also can be demonstrated clearly by slides.

If we take up now the question of the rights of the individual and the public in this matter, I believe that we can determine clearly the grounds upon which a very large percentage of billboards can be distinctly classed as an abuse. Edward Hagaman Hall, secretary of the American Scenic and Historic Preservation Society of New York, states the matter very clearly as follows:

"The Declaration of Independence declares, among other things, that man has an inalienable right to life, liberty and the pursuit of happiness. Law commentators will explain to you that every right which an individual or group of individuals possesses under the law, implies a corresponding duty on the part of other individuals to refrain from invading that right. Liberty, then, does not mean the absolute liberty to do as one pleases. My liberty to do a certain thing may conflict with somebody else's liberty to do something else. This conflict between liberties or rights is resolved in the maxim of 'the greatest good of the greatest number.'

"Now, the liberty of the out-door advertiser is limited by the relation which his interests bear to the interests of the greater number; and if the great number do not want to suffer the annoyance, interference, disgust, pain or other emotion which posters of different classes arouse, they may legitimately assert their claim to immunity.

"I believe that a man's sight is entitled to just as much protection from the violence of that which he does not want to see, as his other senses are entitled to protection from the tastes which he doesn't want to taste, the smells which he doesn't want to smell, or the sounds which he doesn't want to hear. We would not permit a manufacturer to flavor the city's water supply with vanilla for the purpose of ad-

vertising his flavoring extract, any more than we would permit him to pollute it with dye-stuffs. The music of a hand-organ or brass band may soothe the savage breasts of some, but it has been and can be restrained when it renders savage the otherwise peaceful breasts of more. We will not permit a bone-boiler to ply his fragrant trade in the community, however much he and his family might thrive on the atmosphere.

"This matter of out-door advertising has developed in recent years to such proportions that the law is now being invoked to protect the sense of sight in a new way. We cannot say that because posters have been displayed in public for many years, their display has become customary and cannot now be restrained. You might just as well say the same of the soft-coal nuisance. Fifty years ago there was no soft-coal smoke nuisance; the nuisance has come with the multiplied uses of coal. In the same way the poster nuisance has developed to dimensions which call for legal restraint."

Mr. Hall summarizes his argument by saying that the whole theory of outdoor advertising—foundation, superstructure and capstone—is a violation of the law of liberty. Its aim is to force itself upon our attention, and the more inescapable it is, the more valuable it is thought to be as an advertisement. It seizes the most salient feature of the landscape, the rock, the field, the tree, the hill, the mountain, the streamside, the waterfall, the spot to which the eye naturally turns, and there emblazons the advertisement of some pickle, potion or pill.

Presiding Justice Adams, in the case before cited, said that the restriction of public sign-boards "is not taking private property for public use, but a salutary restraint on the noxious use of private property by the owner. Ordinances of this character are upheld on that great principle of law that every person yields a portion of his right of absolute dominion and use of his property in recognition of and obedience to the rights of others."

The paltry amounts which are paid for suburban and country locations are all out of proportion to the imposition and damage resulting. The location for one of the first billboards erected in what is now a sadly afflicted suburb of Boston, was secured by the presentation of a pair of rubber boots to the superintendent of a factory, which for the purpose was well located near a railway station.

For a double-decker billboard of Hyde Park Avenue, the owner of the land is said to receive a rental of $100 per annum, while if the owner of the property in the background were to undertake to sell his property, he would find that the proximity of the billboard depreciated the market value by several hundred if not one thousand dollars.

Fifteen dollars is an average price paid in rental to those who have back yards or unoccupied property available for billboards in the suburbs, while in the open country, locations in fields and upon barns and fences are often upon a picayunish basis of barter of tobacco, clothing or other inducements of doubtful value.

Instead of being an essential factor in business development, we find that to a large degree billboard advertising is a nuisance, a trespass, a blight and a degradation upon the communities upon whom it is imposed. The thorough organizations and the aggressiveness of the bill posters, the competition and the strenuousness of advertisers, are nevertheless resulting in the spread of the epidemic. In the surgical operation which will be necessary to cut off this flagrancy, there are naturally many cries and whimpers on the part of those whose immediate livelihood as bill posters is affected.

The advertisers themselves will recognize that they cannot afford to antagonize public opinion, and will therefore not take an active part.

The greatest hope and encouragement in the situation are the fact that agitation and action are being undertaken throughout this whole country. The bill posters recognize this by strong protective organizations by which every possible weight and influence are brought to bear upon any threatening legislation. The "Seattle Post Intelligencer," in a recent vigorous editorial, reviews the

action by various state legislatures, city councils and railroad corporations to restrict advertising abuses, and concludes with an expression of confident belief that the time will come when private sentiment will be educated up to a point when a man who allows his land, barn or dead wall of his building to be defaced, will be looked upon as an unworthy citizen, and where he himself will feel the impropriety of his act. Reform in this direction, like every other reform, moves slowly, but the indications are numerous that the American people are being thoroughly awakened to the necessity of imposing some reasonable restrictions on advertising abuses, and are ready to sustain the legislatures and the courts in the enactment and enforcement of laws directed to this end.

In Chicago the Billboard Committee of the Municipal Art League has undertaken to carry through enactments for the regulation of the billboard evil. The "Washington Star" says of theatrical advertising on billboards: "Doubtless this form of advertising served its purpose in the days when newspapers were not as extensively circulated and read as they are to-day." Special emphasis is laid on the fact that one of the Washington theatres has discontinued this form of advertising.

A building code recently adopted in Cleveland declares all sign-boards on residential estates—excepting one-sheet boards advertising premises for sale—to be nuisances, and the inspector of buildings is given power to abate them. In New Jersey, sign-board advertising has become a gigantic nuisance and the attention of the Legislature has been called to the necessity of remedial legislation. The State Art Society of Minnesota has filed a protest with the Legislature asking that something be done to regulate the billboard evil. The Illinois Legislature is asked to give power to regulate all billboard advertising. In Oakland, California, an urgent and forceful protest has been made to the Common Council against the erection of billboards.

A recently reorganized firm in southern California estimates the value of its plant and boardings at $800,000, and claims to have forty miles of billboards at an average height of ten feet. This is a confession of the ubiquitous character of this evil even in this far-away summer land.

The story of Rising Sun Stove Polish Morse, who years ago had a sign painted on the rock where now stands the Bartholdi Statue at the entrance of New York Harbor, the suit of the United States government, with the news dispatches sent broadcast throughout the land, provoked a smile at the so-called enterprise of the advertiser and at the great advertisement which he achieved. Public spirit and pride will no longer admit of such vandalism without a prejudice which will react upon the advertiser.

We have to-day, however, to combat insidious arguments relating to rights, and false statements of principles involved. This is not a matter of sentiment. We have to overcome a form of commercial distemper which has broken out practically everywhere. It cannot be treated with homœopathic doses; we must not feel that there is danger of hurting anyone's feelings by remonstrating against their advertising on billboards, or that we are doing an injustice to the poor tax payer who receives some slight income on what may be otherwise profitless property. The enactment of restrictive legislation and enforcement is being undertaken in a surprisingly large number of communities, but we have at hand an immediate and effective recourse to the most important influence of all—public opinion. We must go at the advertiser, and not at the man or the firm erecting billboards. Carpenters and painters will always be found to erect billboards so long as the advertiser will pay day's wages for them.

Local retail firms are most easily reached and most amenable to reason. If a clothier, grocer or market man posts bills within the territory which he covers, personal remonstrance of customers will call his attention to the objectionable features of this form of advertising, which may never have occurred to the advertiser. He naturally feels that if such methods are used by large advertisers, he can apply them to

advantage to his own business. If public service companies or corporations undertake such forms of advertising, they must most of all be dealt with emphatically. Both gas and electric light companies have recently proved the value of advertising, which has led to a great increase for the use of their products in light and power. It is reported that the Edison Company of Boston began with an appropriation of $10,000, which proved so successful that it has been gradually extended to an amount now of approximately $80,000 per annum. This company uses some billboard advertising, as does also the New England Telephone and Telegraph Company. The latter company has a large sign on the end of a building at the junction of Columbus Avenue and Tremont Streets, Boston, as well as in other conspicuous places, alongside of patent medicines, whiskey and installment house signs. It is beneath the dignity and in violation of civic pride that these companies should engage in any such forms of advertising and in such company.

Of the department stores of Boston, only two make any use whatever of billboards. If individual protests and remonstrances from organizations were sent to these firms, it is within reason to believe that this form of advertising would be promptly abandoned.

One Boston daily is a conspicuous offender. It is an open question as to how it can reconcile its arguments to its own advertisers for the use of its columns and yet do its own advertising upon billboards.

The bill poster seized upon the improvements in the vicinity of Forest Hills as a fine location for billboards. A Boston haberdasher used one of the first boards erected in that locality. One of his customers asked him why he did it. His attention being called to his apparent lack of public spirit as shown by such action, he said it never occurred to him in that light and that he would never again enter into such an arrangement.

The Pillsbury Flour Company sent 5000 large sheets to New England. The agent's attention was called to the prejudice against such advertising, and he immediately packed the bills and sent them to the home office. Unfortunately these were probably inflicted upon some less active community. These are but few instances which go to show the immediate and effective results which can be accomplished by a general campaign.

We must not for a moment hesitate to combat billboards because of any feeling that our attitude in this matter is merely that of sentiment and that we would like to see billboards done away with. It is not sentiment; it is right and justice to place limitations upon a form of advertising in which the cost to individuals and communities entirely overbalances any imagined or real benefit to the advertiser.

Why should local organizations bestir themselves to improve the streets, squares and buildings of their communities if they are to be subjected to the imposition of billboards, immediately that improvements produce a point of vantage to the bill poster?

In one of this month's editorial discussions of the value of civic improvement societies, this important statement is made: "Few forms of artistic endeavor offer such definite financial returns as that phase of public art which is termed civic betterment."

The city beautiful and the home beautiful are no longer visionary or dreams for the future, but are being realized in almost every section. Shall we sacrifice that for which we strive and which we hold so dear to what is most distinctly mistaken commercial enterprise?

The appeal of the billboard is to individuals, and it is the individual who can make its ineffectiveness and offense apparent to the advertiser. Let each one do his part and this blight upon real estate values and upon public betterments will be a thing of the past, which we shall soon look back upon merely as an epidemic which affected our commercial progress.

Henry Lewis Johnson.

In general terms, no advertising sign may be put up anywhere in Massachusetts without the *written consent* of the

owner or tenant of the land on which it is exhibited, under a penalty of $10. Any sign put up without such consent may be legally removed or obliterated by anybody.

One may simply write to the person who put up the sign, or to the person whose business is advertised, asking him to come and take it down, paint it out, clean it off, or otherwise repair the disfigurement, threatening him with the fine imposed by the law below cited, in case he does not comply with the request.

One may ask the owner or tenant of the land whether he gave a written consent for putting up the sign; and, if he did not, one may induce him—or, if he is too indolent, some public officer—to go to the nearest police court and complain to the clerk of the violation of the law, and ask that the offender be prosecuted.

In a great many cases, without taking the trouble to make inquiry of the landowner, one may feel convinced from the character and location of signs that they were put up without written consent, and may act accordingly, pulling them down without further ado.

The full text of the law here follows:

"Chapter 208, Section 115. Whoever paints or puts upon, or in any manner affixes to any fence, structure, pole, rock, or other object, which is the property of another, whether within or without the limits of the highway, any words, device, trade-mark, advertisement, or notice, which is not required by law to be posted thereon, without first obtaining the written consent of the owner or tenant of such property, shall, upon complaint of such owner or of his tenant, or of any municipal or public officer, be punished by a fine of not more than ten dollars. Any word, device, trade-mark, advertisement, or notice, which has been painted, put up, or affixed within the limits of a highway in violation of the provisions of this section shall be considered a public nuisance, and may be forthwith removed or obliterated and abated by any person."

There's no difference between a "booster" and a pessimist. But there is a difference between an optimist and a pessimist—the former succeeds where the latter fails. An optimist will succeed because he will take advantage of all progress and will create progress. No business man who is a pessimist can hope to succeed because the fear of failure or lack of confidence is ever with him and proves a handicap. Confidence begets confidence, and universal confidence brings the prosperous periods. A community or state will be just what the people of that community or state make it. If we are all pessimists we'll grovel in stagnation; if we are all optimists we'll revel in prosperity. Of course, a wise optimist expects trouble, but he looks upon it as insignificant, or as a mere detail. Don't expect success without optimism. Join the "boosters."—The Price Current.

DEVELOPMENT OF WORCESTER'S WATER SUPPLY.

ONE of the most important propositions before the City Council is the further development of the city's water supply. The storage capacity of the reservoirs comprising the Leicester, Paxton and Holden water sheds, known as the Kettle Brook and Tatnuck Brook systems, is 2,850,000,000 gallons. With the average annual rain these reservoirs would furnish ample supply for the city's present population. But Worcester is growing and dry seasons are to be reckoned with. Several years ago a dry season was experienced and considerable anxiety was experienced by the Water Department and the citizens generally. It will be remembered that the strictest economy in the use of water was urged and practiced.

For a year or more the further development of the city's water supply has been considered by mayors and water officials. Asnebumskit is the prospective future supply and the taking of its water would provide a supply sufficient for a future Worcester of 300,000 people. The city councils of the past two years have studied the proposition and City Engineer F. A. McClure has been asked for an estimate of the development of the present source of water supply. He has gone into the proposition fully, and gives to the City Council the following information and estimate as answer to the request "of the estimated expense for the complete development of the present sources of water supply." As it is important it is here given in full:

The present system of the city's water supply consists of six impounding reservoirs, together with three smaller basins for distributing and diverting purposes, having a total storage of 2,580 million gallons. The oldest reservoir now in use is the Lynde Brook storage basin, which was begun in 1864 and finally brought to its present dimensions in 1871. It has a storage capacity of 681 million gallons, and is the source of supply for the high-service part of the system. Previous to the acquisition of Kettle Brook its supply of water came from a drainage area of 2.71 square miles of land surface, which was hardly sufficient in extent to keep the reservoir in a satisfactory state of repletion, the reservoir having failed to fill six times in the period from 1880 to 1895. The draft upon the reservoir at this time was from two to three million gallons daily, and its inability to ensure the demands upon it led to the taking of the adjacent stream in 1895. Without going into details of its unsatisfactory service and quality of the water due to improper cleaning of the basin as originally used, and to the long exposure of its shores to vegetable growths, I will state directly that from my observation of the brook and reservoir during many years, I believe the stream to have been overdeveloped in storage capacity. This condition, however, was made use of in the development of Kettle Brook, and was utilized to furnish storage for a part of the waters of this stream. The lower part of the catchment area of Kettle Brook being thus provided for with storage, there remains 3.1 square miles upon which three dams were constructed at favorable points. The total storage of this stream is 811 million gallons, and which I believe is suitable and sufficient. This stream, together with Lynde Brook, provides the water for the high service and part of the low service supply, and which in amount is about one-half of the total consumption of water by the city. Last year the draft from this source amounted to 1,878 million gallons. It may be of interest to know that last spring the Lynde Brook reservoir barely filled, and the basins on Kettle Brook lacked 200 million gallons of being full. It would seem that any further development of these sources of supply is not advisable.

The remaining sources of supply are

situated on Tatnuck Brook in the town of Holden, where two reservoirs exist with a total storage of 1,077 million gallons. The lower basin has a maximum depth of about 40 feet and its water surface extends to the outlet pipes from the upper, or reservoir No. 1, as it is designated by the Water Department. Its area is 52 acres and an attempt to increase the storage capacity of this basin would result in saturating the lower slope of the dam above, which was not built with this object in view. The possible contingency of ice formations in and about the discharge pipes is further objection to any increase in the capacity of this reservoir. The cost of its further development would also be out of proportion to the benefits obtained when it is considered that for every foot of additional height, the upper reservoir, if raised, would impound over twice the volume of water contained in the lower basin for the same amount of increase. From my knowledge of the existing structures and the several features to be considered in any undertaking for an increase of storage on this stream, I believe the dam at Tatnuck Brook No. 1 reservoir to be the more suited for the purpose.

By the wording of the order "the complete development," I assume the quality of the water is also to be considered in the determination of any proposed increase to the storage. The basis of estimation of the quantity of surface water which may be obtained from a given source depends upon the extent of the catchment area or water shed, the amount of rainfall upon it, the proportion of rainfall or run-off which finds its way into the streams, and the amount of water which can be stored in the wetter portions of the year for use during the drier portions. The amount of this run-off which can be made available does not always depend upon the quantity of water which can be stored, because considerations of quality require that the levels of the reservoir should not fluctuate too much, or the reservoir be drawn below high-water mark for too long a time. The unequal distribution of the rainfall should, therefore, be taken into account, and it will be readily understood that if all of the run-off in a wet year, or series of wet years, were to be caught and stored, there might be many years before a like period of precipitation would recur, and a heavy growth of vegetation would have sprung up on the exposed margins of the reservoir during this interval. The past decade has been a period of excessive precipitation, exceeding in its average any like interval of time during the past forty years. It is evident that if the reservoir was capacious enough to store all the run-off during such a series of years, the condition of the basin before the recurrence of a similar period of precipitation would be unfit for storage purposes. While these reflections are somewhat of a general nature, if we consider the taking of the Asnebumskit Brook to be an act of the near future, and its waters used to augment any excess of storage that may be available during the seasons of a diminished rainfall, then I believe under such conditions we may with reason consider an increase of storage on Tatnuck Brook of such capacity as to provide for practically all the run-off of its water shed. To accomplish such a work would require raising the water level about 27 feet, and adding to the present water surface a little over 97 acres. The increase in storage would approximate 1,600 million gallons, and the additional area of land required about the reservoir by purchase approximate 100 acres. The maximum depth of the reservoir would be increased from 30.1 feet to 57 feet, and its average depth from 17 feet to 31 feet. A storage such as this would be below high-water mark eleven years, with a recurrence of the precipitation succeeding the year 1878, and would therefore need assistance from the Asnebumskit Brook to prevent objectionable conditions taking place during a similar period of low rainfall, but I believe if additional storage is to be provided on Tatnuck Brook, that the better course to pursue is to carry it to the limit. Every gallon of such a reservoir is needed to-day, with sufficient drainage area behind it to keep it in a state of effectiveness.

With the reservoir raised as here sug-

gested, and with efficient management, all the water of ordinary years could be caught and utilized, and with the Asnebumskit Brook to draw upon in the years of diminished rainfall, any surplus of storage at such times would be of decided value. As I have stated elsewhere, such a reservoir is liable to be below high-water mark for several succeeding years, but its advantage would be appreciated with a recurrence of the precipitation of the years just past. A fact with which you are well acquainted, but one I wish to emphasize, is the liability of succeeding years of low precipitation, when, if all the water were caught, it would not be sufficient to supply the present demand upon this stream. During the period for the sixteen years following the year 1878, there were seven years when the annual runoff of the Tatnuck Brook water shed would not have furnished the draft made upon this source last year, and with the ever increasing population and consumption of water, the probabilities of failure are greater with each succeeding season.

In recent years this source has supplied about 75 per cent. of the water for the low service system of the city, and in the future will be called upon to furnish a much larger proportion, as the Lynde and Kettle Brook reservoirs will have less water to spare as the high service part of the distribution is increased.

With the Tatnuck Brook reservoirs as they now stand, I believe that no more than four million gallons daily could be drawn through a dry year, while the draft for the past season exceeded five million gallons a day, and even this amount would undoubtedly be increased in a dry year unless restrictions in the use of water were enforced.

In my mind there is only one conclusion to be drawn from the records of the Water Department, and that is that additional water should be procured without delay. To attempt to raise the present dam without an equal or greater amount of stored water to draw upon would be a grave mistake and one fraught with great hazard. To build a suitable structure for the reservoir I would recommend, requires the draining of the present basin and the relinquishment of its use for the better part of two seasons. It is obvious that this should not be thought of for a moment without first assuring its equivalent, or better, elsewhere. In my opinion, therefore, the course to pursue is to procure an additional supply of water in sufficient amount to ensure the requirements of the city, and to be followed by building the dam and reservoir herein considered.

Plans for such a structure have been prepared and are on file in theEngineering Department. The estimated cost of this work, including the change of location of highways, cleaning of the basin and purchase of the additional land necessary, amounts to $614,000.

Fred'k A. McClure.

It is one of the parodoxes of American progress and civilization that, given a people the most intelligent in the whole world, with the highest political ideals, the largest comprehension of moral and spiritual values, the greatest system of democracy the world has ever known, we have in the United States the poorest apology for municipal government to be found under the sun, anywhere. We get less for our money and put up with more maladministration than any other civilized people in any part of the world. How are we to account for this? What possible excuse is there for it? Is it not time that we set earnestly about righting it?—*Dr. Thomas B. Payne.*

WORCESTER BOARD OF TRADE.

BANK BUILDING, 11 FOSTER STREET.

OPEN 8.00 A.M. TO 5 P.M. PRESIDENT'S HOURS: 1 TO 2 P.M. MONDAYS, TUESDAYS, WEDNESDAYS AND FRIDAYS.

PRESIDENT, HARRY W. GODDARD. VICE-PRESIDENT, PAUL B. MORGAN.
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The Worcester Board of Trade wants to keep on file at the Secretary's office a complete list of places where floor space can be secured for manufacturing and business purposes. There are calls made every day for such information. The Secretary would appreciate it if every owner of a building in Worcester used for manufacturing or mercantile business would furnish particulars of what he has for renting purposes, and if land-owners would also file a list of available building sites. State owner, location, whether store or factory, amount of floor space, amount of power available and approximate rental. If it is land for manufacturing purposes, state owner, location, number of square feet, general dimensions, any building thereon; if so, give floor space, number stories, brick or wood, power plant with horse power, and purposes last used. Also give name of railroad near it and side-track facilities. Give price that can be used as basis of negotiation.

This information is for the use of the Secretary, and is not to be used for any purpose except to locate new or present business interests. No compensation is to be asked for any lease or rental that may be brought about by the Board of Trade.

Historical: Worcester High School was established in 1845, two years after Providence and four years before New York and Springfield.

The Arkansas Democrat, of Little Rock, prints the following notice of the November number of the Worcester Magazine:

"The Worcester Magazine, published by the Board of Trade of Worcester, Mass., in its issue for November, has a strong article on co-operation and urges that the way to build up a city is by co-operation on the part of the people."

The following notes are furnished by the Worcester Polytechnic Institute:

Mr. George E. Pellissier, a graduate in the civil engineering department of the Tech. class of 1904, who has since graduation held the position of chief engineer of the Holyoke Street Railway Company, has resigned that position to accept a flattering offer from the Goldschmidt Thirmit Co. of New York. Mr. Pellissier was the first engineer in the United States to make use of thermit, the new material for welding joints in street railway work, and his success in connection with the Holyoke Street Railway Company has attracted the attention of street railway men in all parts of the country. His new duties will take him to the large cities of the middle and far West, where he will assume charge of installation work in connection with the use of this new material.

The Washburn Shops have received during the past week a large number of small orders for machinery. Of these the largest was a cable order from Milan, Italy, for six sensitive drills. This order is one of a noticeably large number of orders that have been received from Italy during the past few months.

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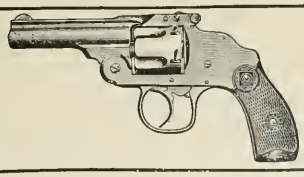

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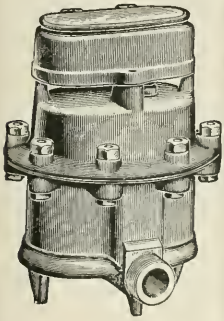

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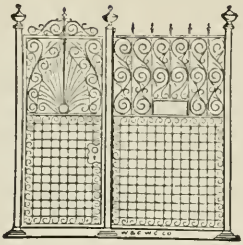

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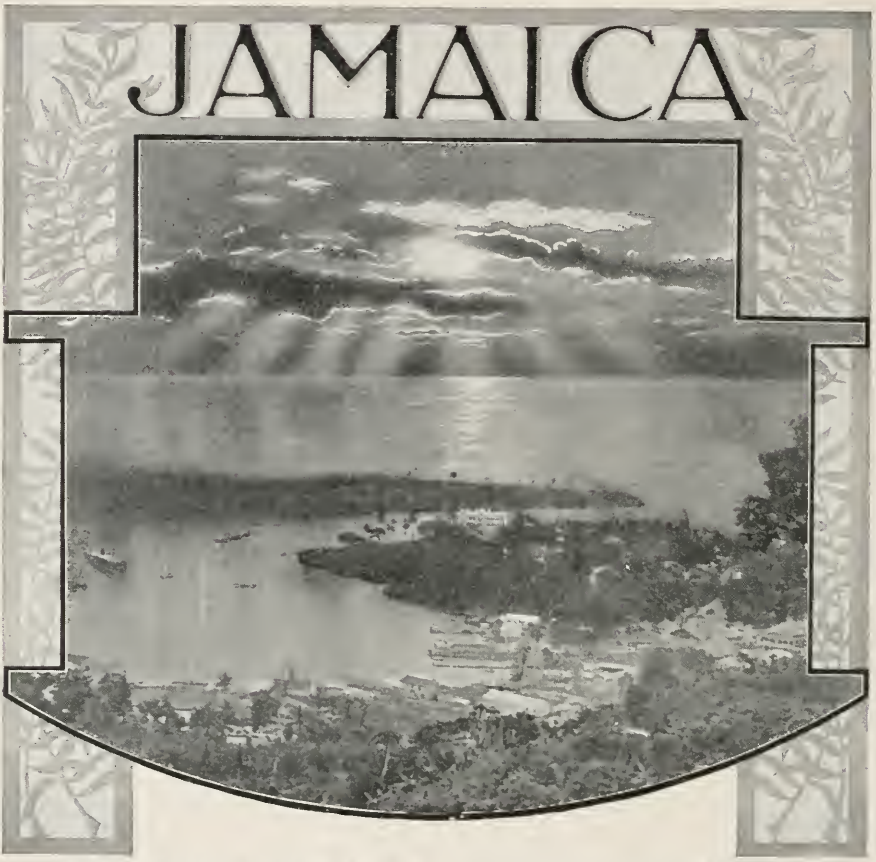

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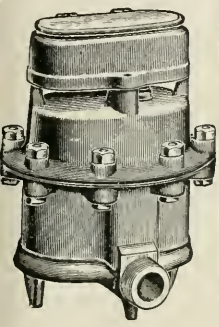

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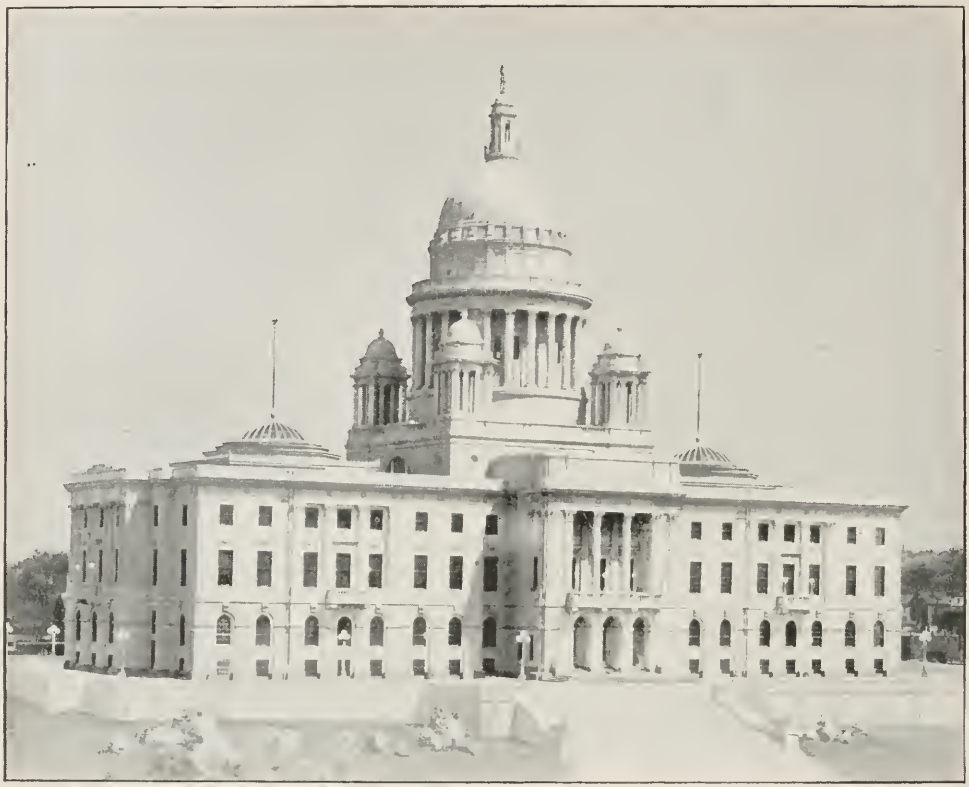

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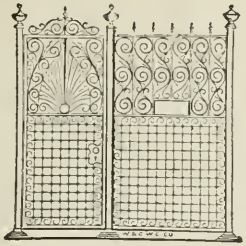

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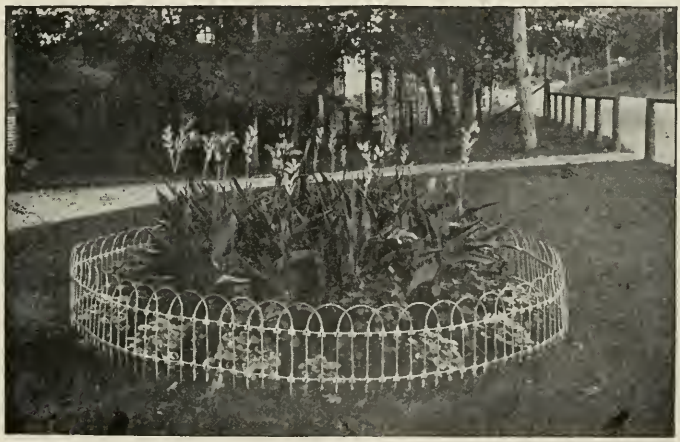

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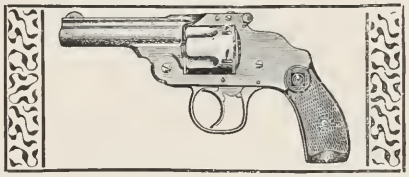

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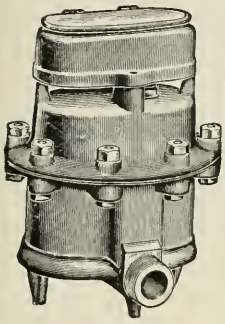

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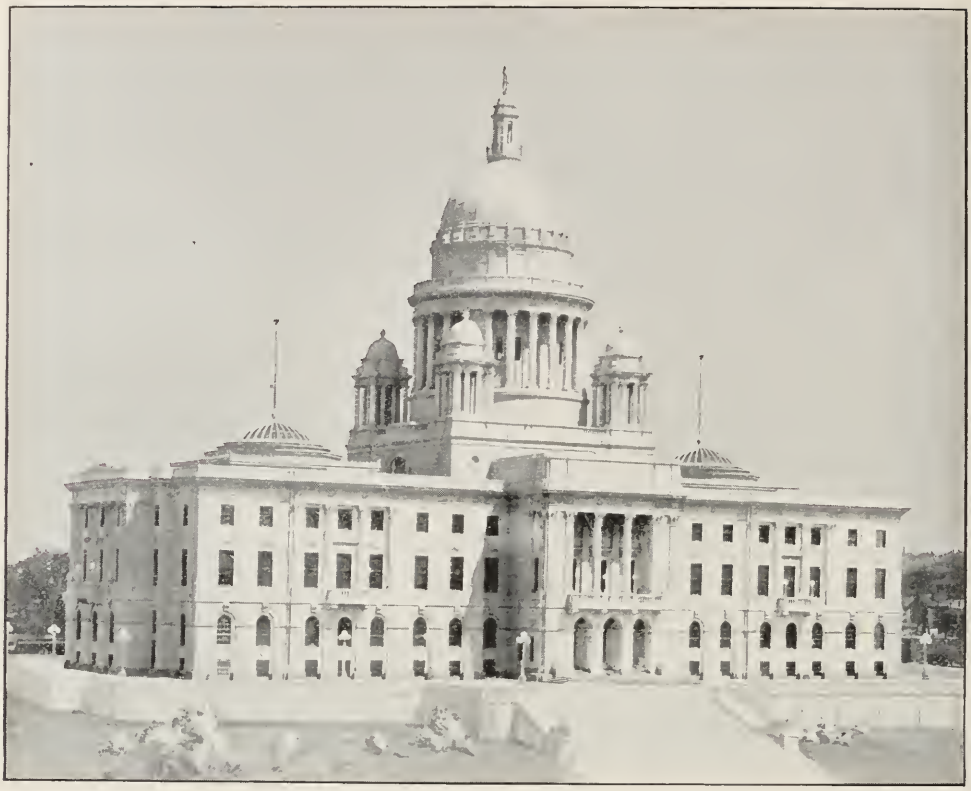

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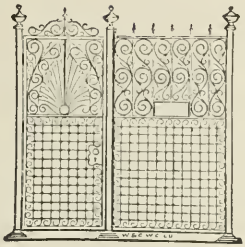

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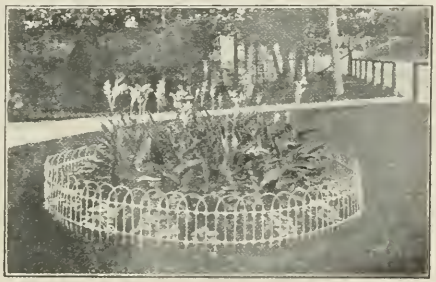

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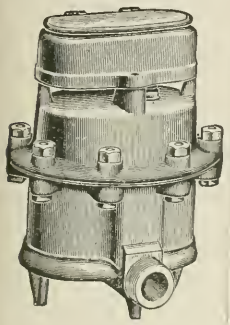

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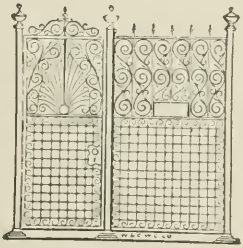

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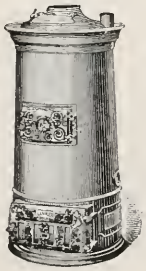

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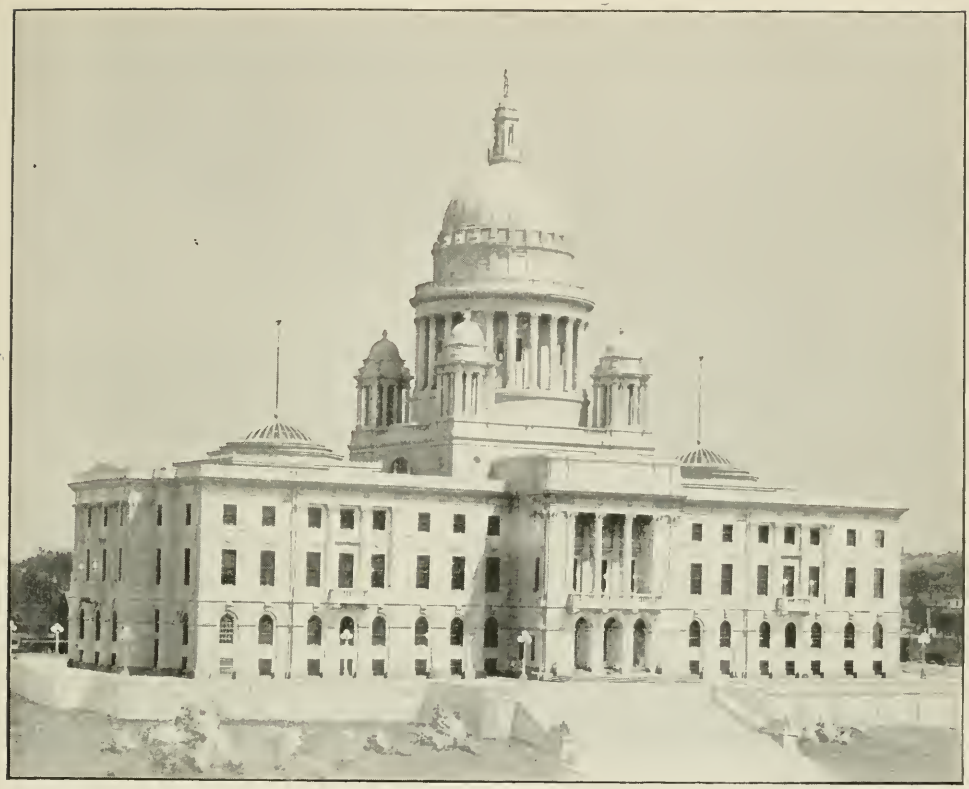

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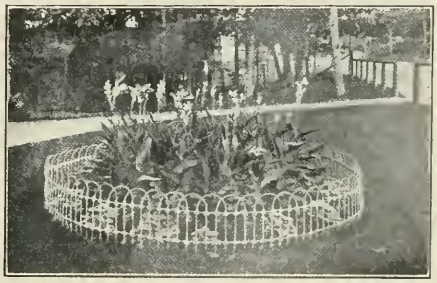

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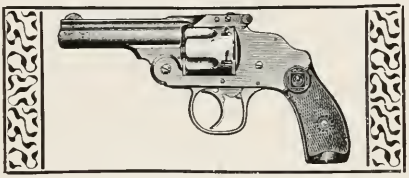

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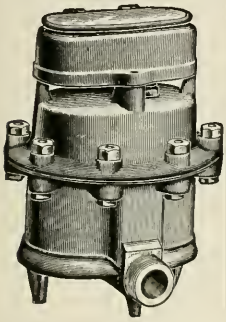

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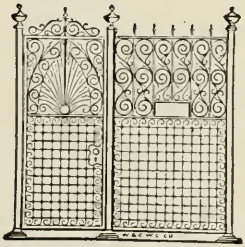

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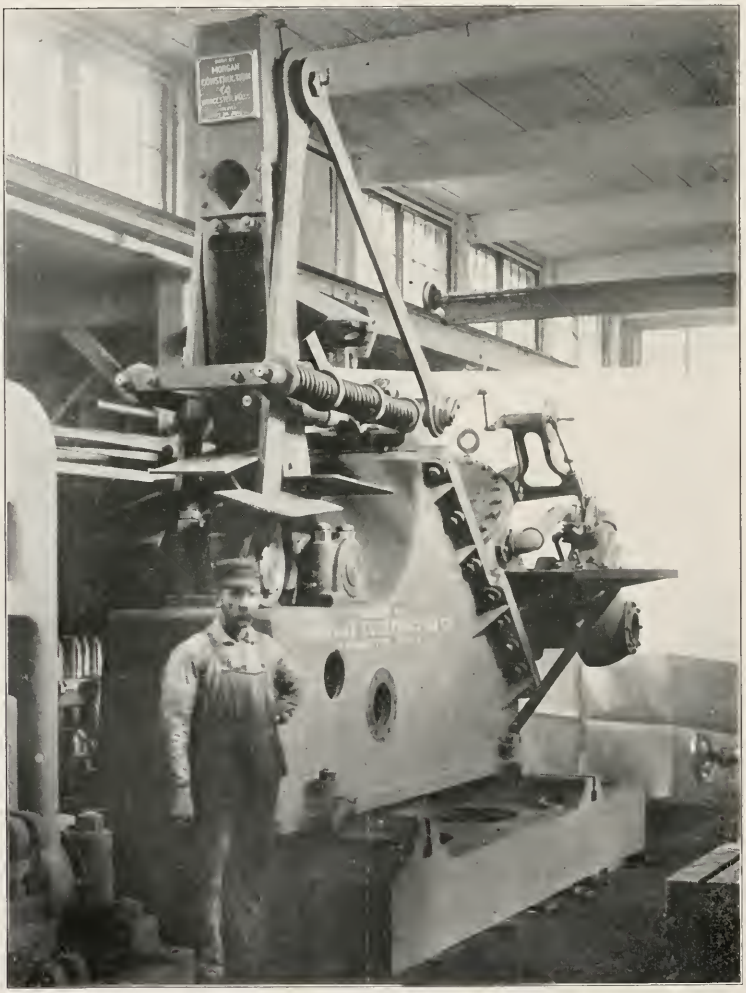

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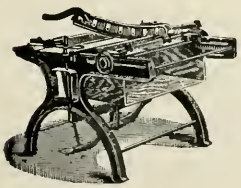

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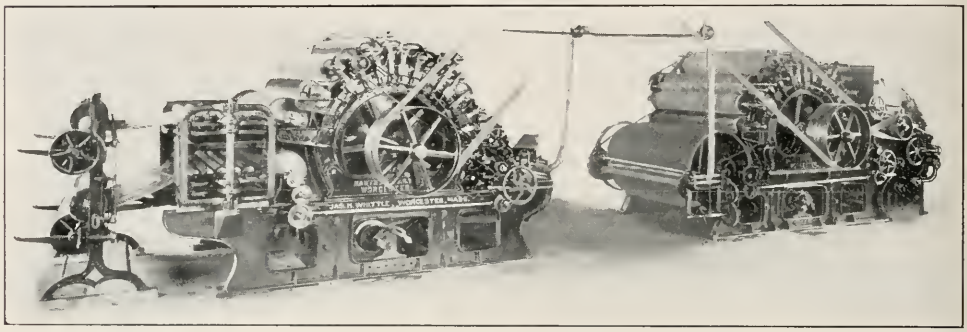

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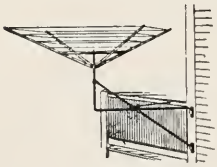

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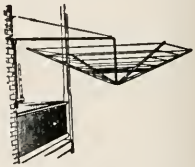

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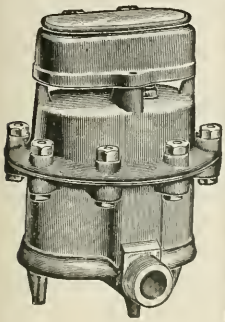

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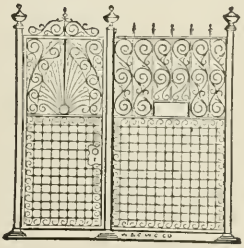

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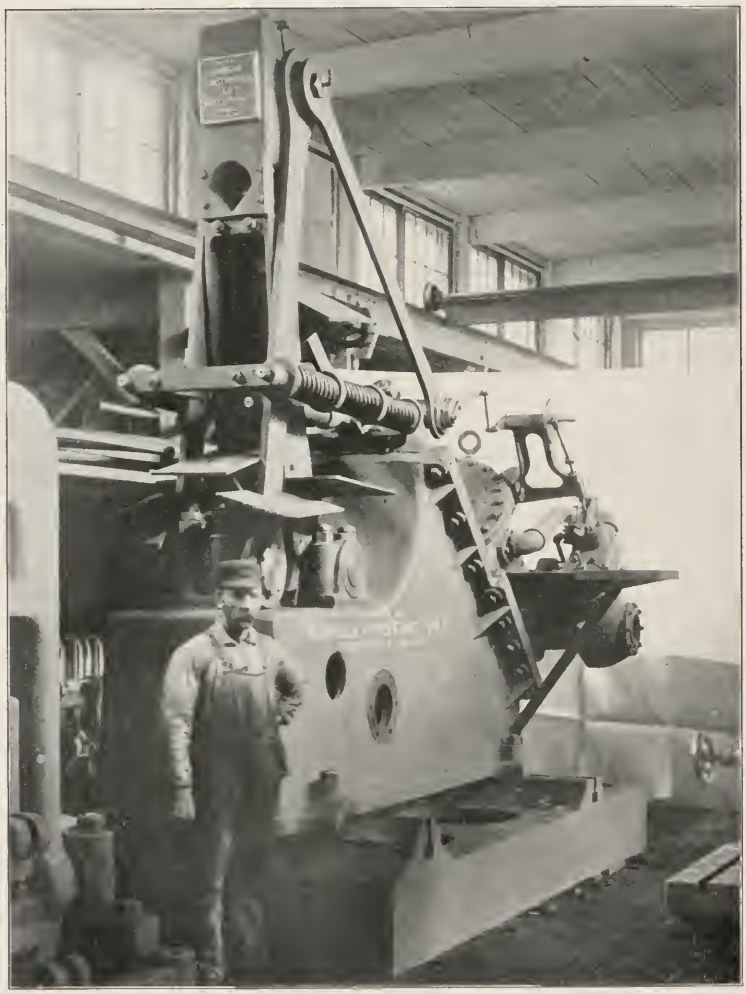

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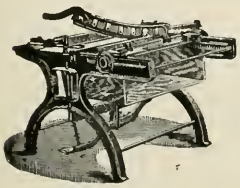

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WORCESTER COUNTY INSTITUTION FOR SAVINGS, 13 Foster Street. Incorporated, February 5, 1828. Deposits, $19,014,022; assets, $20,414,156; number depositors, 39,955. Deposits put on interest January, April, July and October. Dividends payable January 15 and July 15. President, Chas. A. Chase; Vice Presidents, Edward L. Davis, Geo. E. Francis, Thos. H. Gage; Treasurer, Alfred L. Aiken; Board of Investment, Chas. A. Chase, Sam'l B. Woodward, Geo. E. Francis, Lyman A. Ely, A. George Bullock; Clerk of Corporation, Chas. F. Aldrich.

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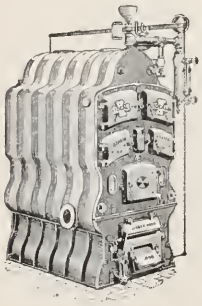

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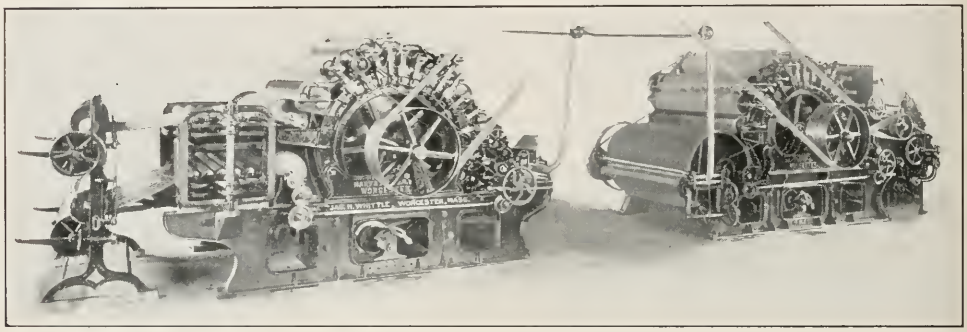

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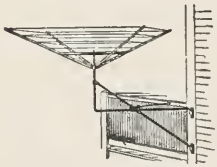

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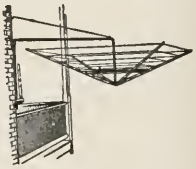

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The Worcester Magazine

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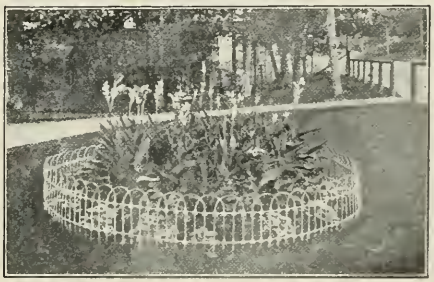

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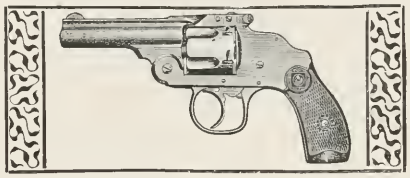

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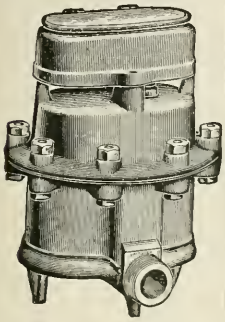

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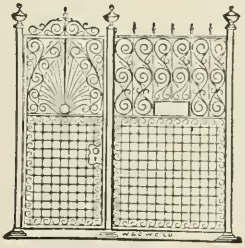

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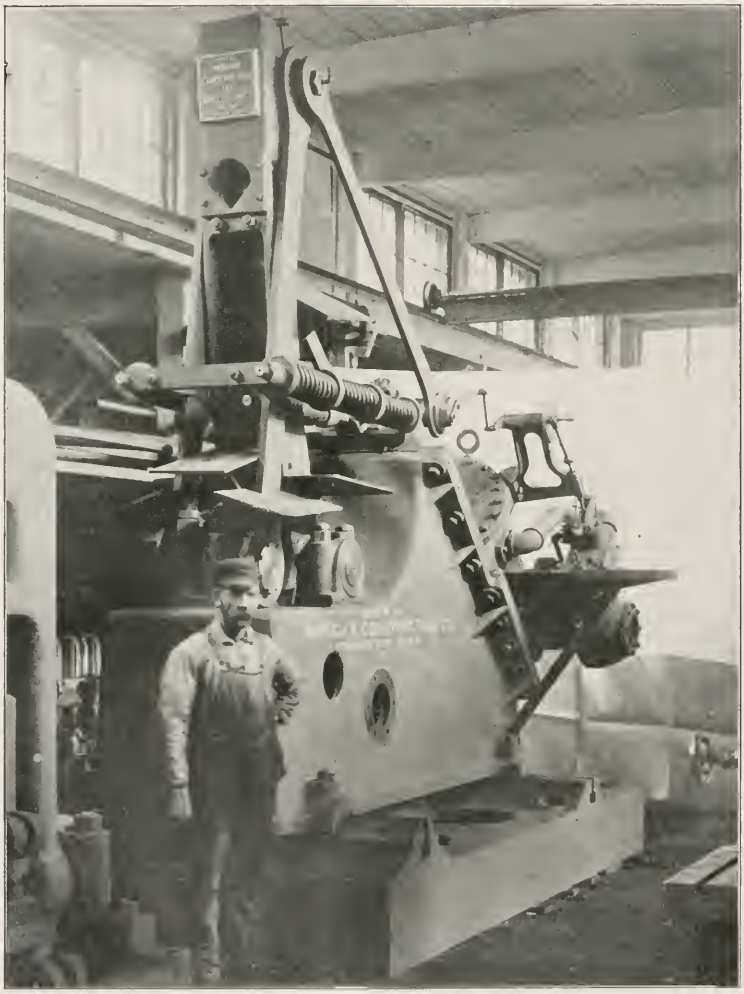

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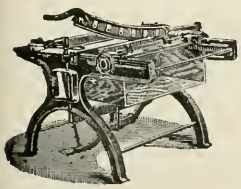

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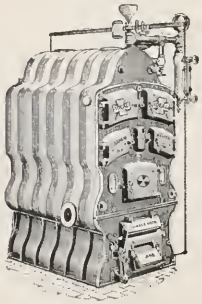

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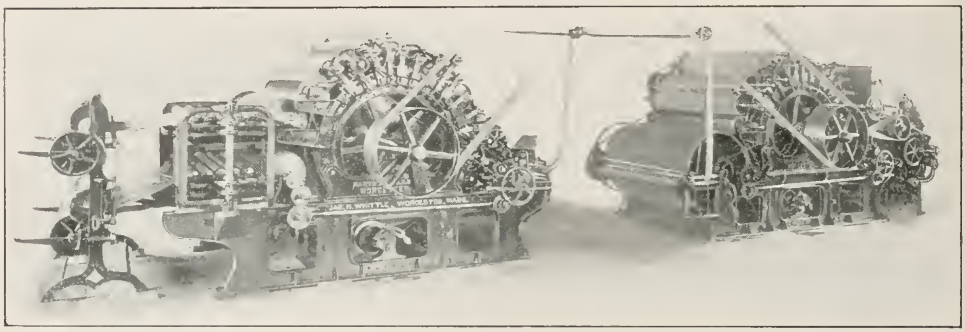

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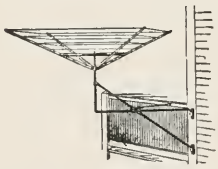

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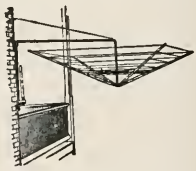

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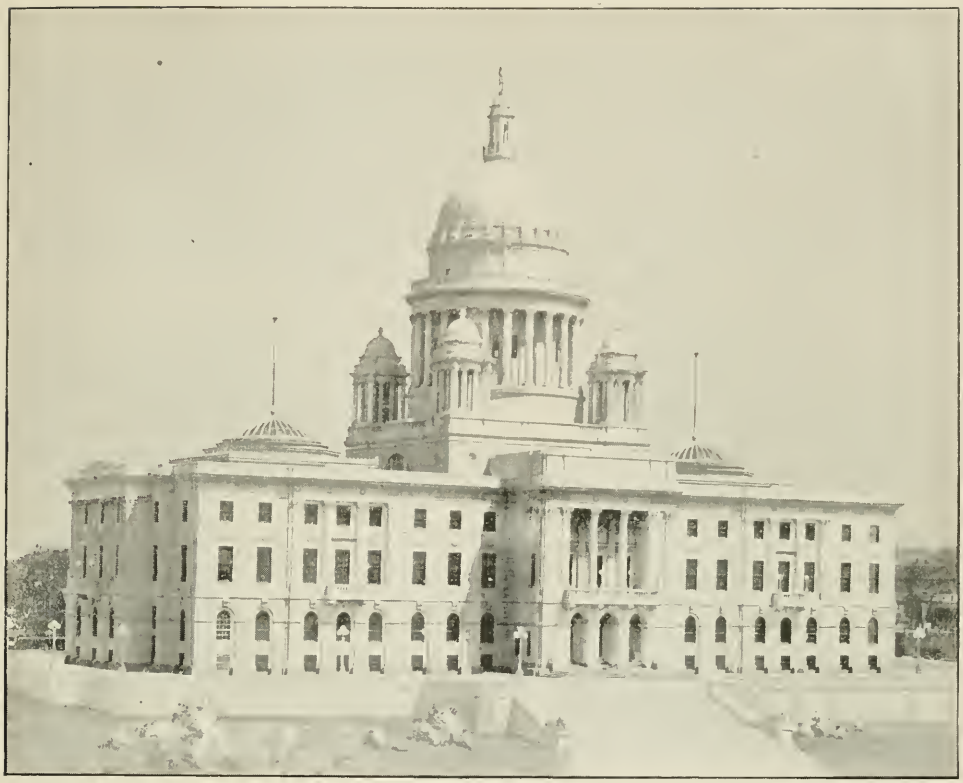

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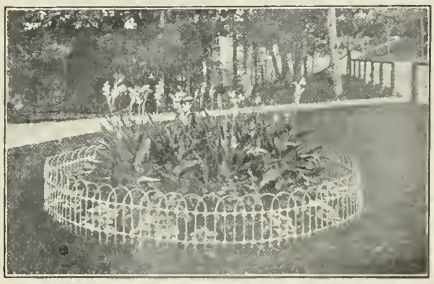

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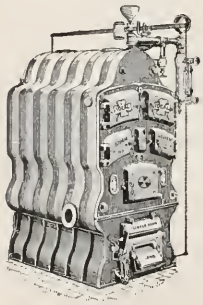

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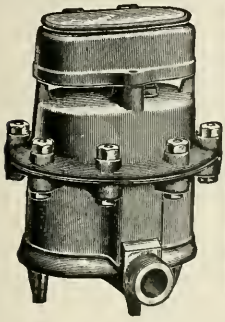

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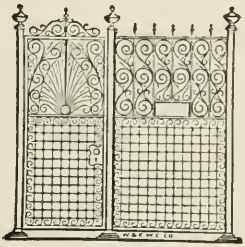

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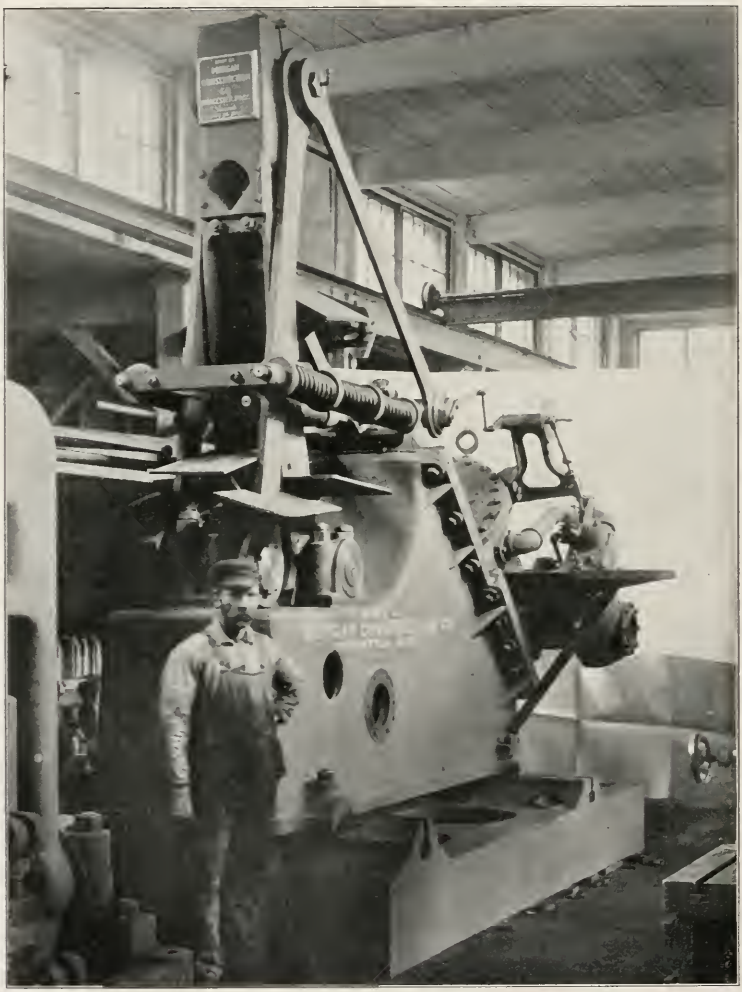

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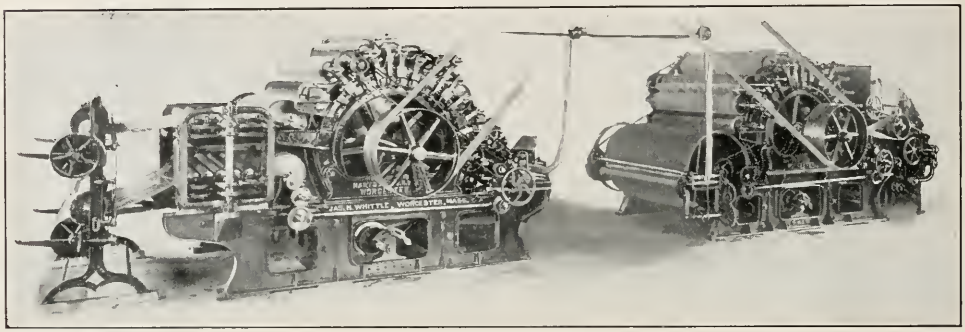

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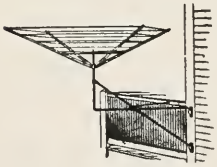

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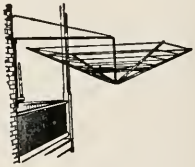

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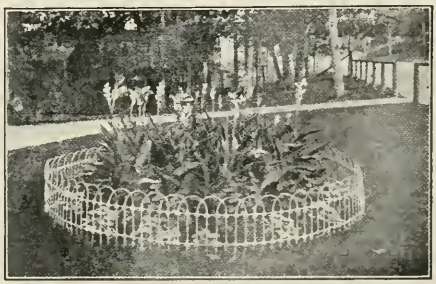

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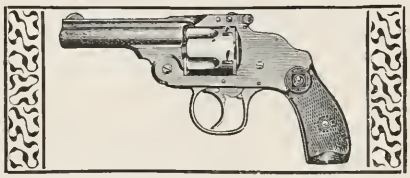

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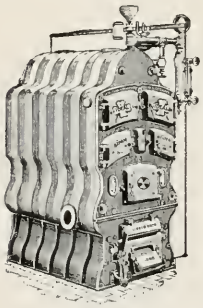

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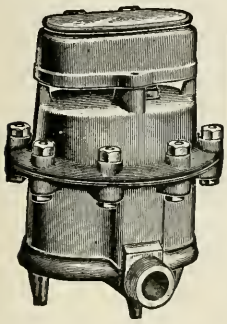

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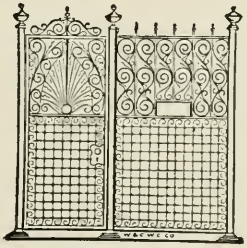

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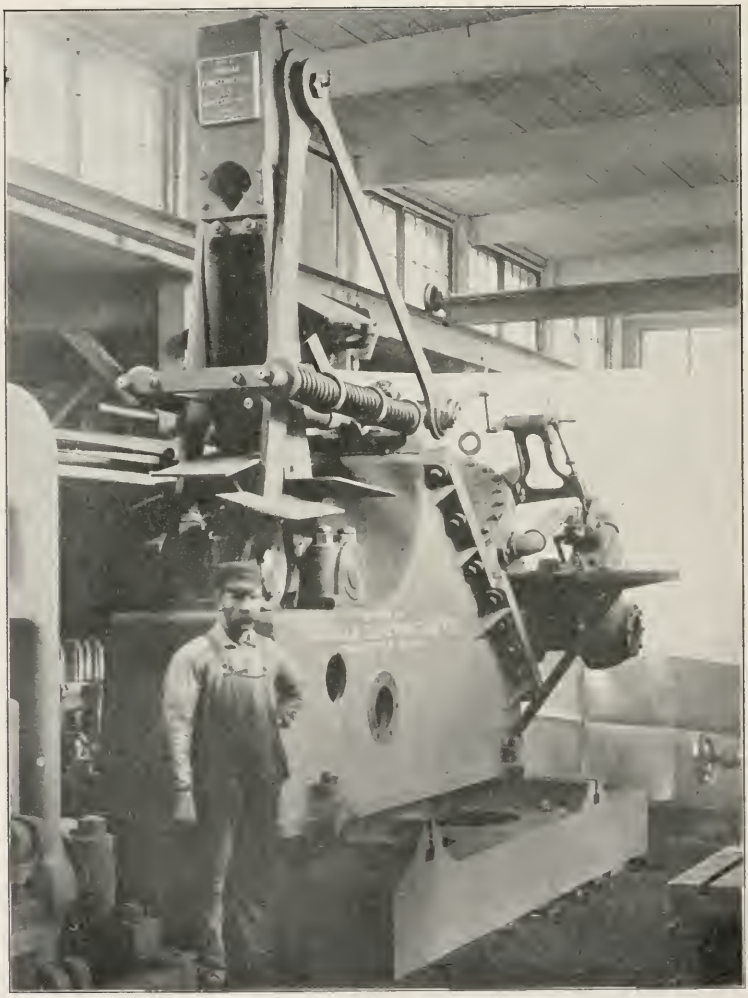

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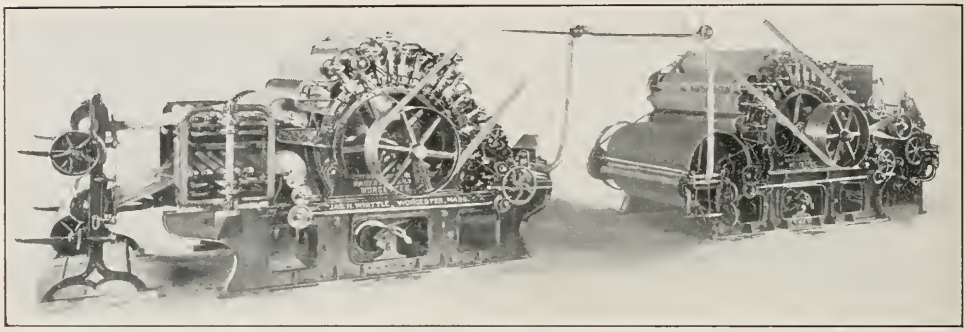

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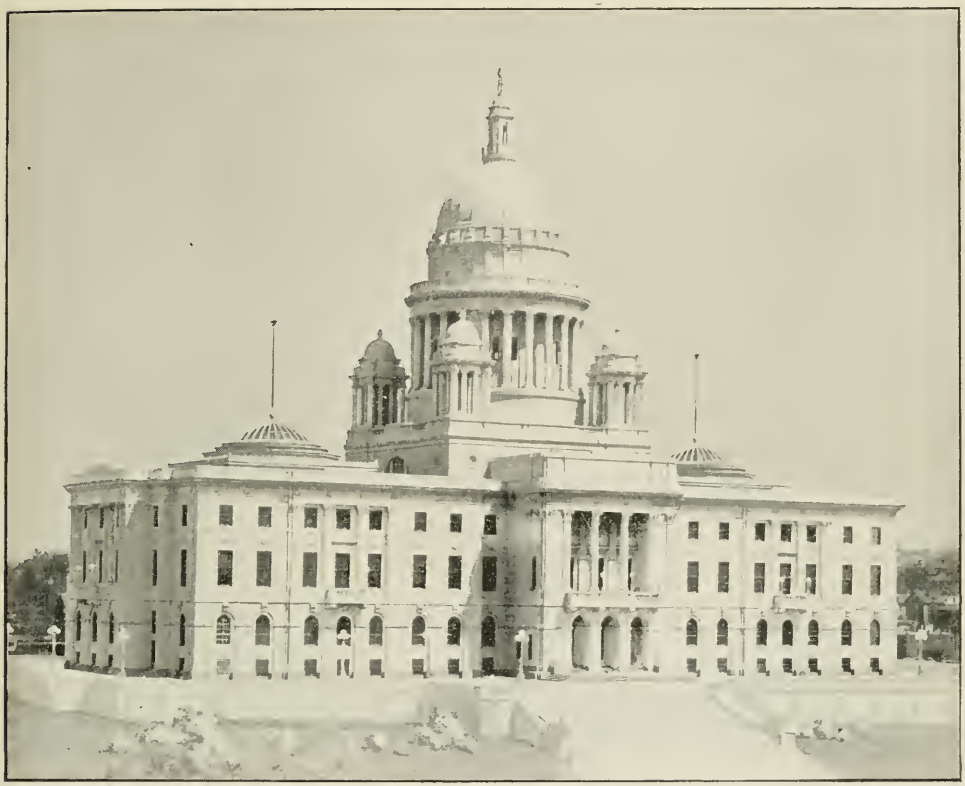

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WORCESTER

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EVERYTHING

Here are a few of the articles made by Worcester Mechanics

Agricultural Mach'y
Ash Sifters
Barb-fence Wire
Belting
Bicycle Parts
Blacksmiths' Tools
Blankbooks
Billiard Tables
Boats
Boilers
Bolts
Boot and Shoe Machinery
Box Machinery
Bronze Castings
Brushes
Cars
Card Clothing
Carpets
Carriages
Caskets
Cloth Finishing Machinery
Copying Presses
Corsets
Corundum Wheels
Cotton Machinery
Cut Glass
Cutlery
Drills and Grinders
Drop Forgings
Elevators
Emery Wheels
Engines
Envelopes
Fences
Fertilizers
Firearms
Fire Escapes
Gas Engines
Gear Cutters
Hats
Horse Collars
Heddles
Hydraulic Machinery
Ladies' Underwear
Lawn Mowers
Lathes
Locks
Looms
Machine Screws
Machine Tools
Malleable Iron
Mattresses
Metal Punchers
Meters
Oil Extractors
Organs
Paper Boxes
Planers
Rattan Goods
Razors
Rolling Mill Machinery
Rugs
Saws
Sample Cases
Shafting and Pulleys
Shears
Skates
Springs
Steam Engines
Stove Trimmings
Tape
Thread
Trunks
Twisting Machinery
Umbrellas
Wallpaper
Water-wheels
Wire of all kinds
Woodworking Machinery
Wire Machinery
Wire Goods
Woolen Goods
Wrenches

WRITE THE BOARD OF TRADE

FOR MORE INFORMATION

The Worcester Magazine

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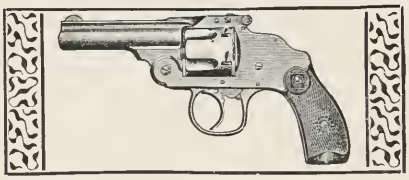

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Pattern Making for all kinds of Machinery. Variety Wood Turning

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164 Union St., Worcester, Mass.

Telephone Connection.

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9 Main Street, Worcester.

"On Time" our watchword

Machine Jobbing, Special Machinery, Patents perfected and

Automobiles

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Hydraulic Plunger

ELEVATORS.

OFFICE AND FACTORY.

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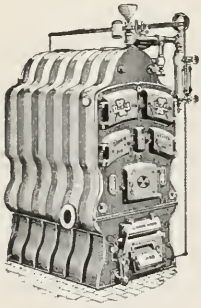

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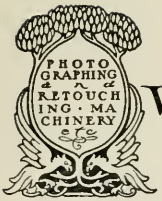

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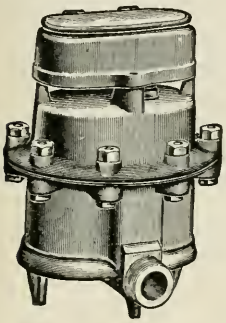

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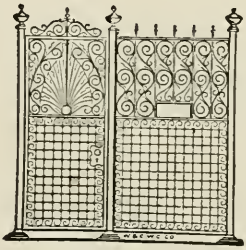

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404 Main Street, Cor. Pearl.

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Bronze Castings
Brushes
Cars
Card Clothing
Carpets
Carriages
Caskets
Cloth Finishing Machinery
Copying Presses
Corsets
Corundum Wheels
Cotton Machinery
Cut Glass
Cutlery
Drills and Grinders
Drop Forgings
Elevators
Emery Wheels
Engines
Envelopes
Fences
Fertilizers
Firearms
Fire Escapes
Gas Engines
Gear Cutters
Hats
Horse Collars
Heddles
Hydraulic Machinery
Ladies' Underwear
Lawn Mowers
Lathes
Locks
Looms
Machine Screws
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Malleable Iron
Mattresses
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Meters
Oil Extractors
Organs
Paper Boxes
Planers
Rattan Goods
Razors
Rolling Mill Machinery
Rugs
Saws
Sample Cases
Shafting and Pulleys
Shears
Skates
Springs
Steam Engines
Stove Trimmings
Tape
Thread
Trunks
Twisting Machinery
Umbrellas
Wallpaper
Water-wheels
Wire of all kinds
Woodworking Machinery
Wire Machinery
Wire Goods
Woolen Goods
Wrenches

WRITE THE BOARD OF TRADE

FOR MORE INFORMATION

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George H. Clemence, Architect, Walker Building, Room 205, 405 Main Street, Worcester, Mass.

Stephen C. Earle, Architect. Room 45, Burnside Building. 339 Main Street. Worcester, Mass.

Fuller & Delano Company, Architects, 452 Main St. Worcester, Mass. Ward P. Delano, Robt. L. Fuller

Clellan Waldo Fisher, Architect. Office, 718 State Mutual Building, Worcester.

Edward P. Fitzgerald, Architect, Room 705. State Mutual Building 340 Main Street, Worcester.

Frost, Briggs & Chamberlain, Architects, Offices, 518 Main Street, Knowles Building. Worcester, Mass.

Edward Topanelian, Architect, Room 705, State Mutual Building, 340 Main Street, Worcester.

ASH SIFTERS.

"Hustler" Ash Sifter. HILL DRYER CO., 340-350 Park Avenue, Worcester, Mass.

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People's Savings Bank. 452 Main Street. See Advt.

Worcester County Institution for Savings, 13 Foster St. See Advt.

Worcester Five Cents Savings Bank. 314 Main St. See Advt.

Worcester Mechanics Savings Bank, 311 Main St. See Advt.

Worcester National Bank, 9 Foster Street. See Advt.

Worcester Trust Co., 448 Main Street. See Advt.

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Life Policies. STATE MUTUAL LIFE ASSURANCE CO. See Advt.

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Suit Cases and Bags, Toilet Cases, Music Goods, Etc. WARREN LEATHER GOODS CO., 80 Austin Street.

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Planers a specialty, Machine Tools, Lathes and Drills. J. S. WHEELER & CO., 23 Hermon Street.

Lathes, Punches and Shears. W. C. YOUNG, 17 Hermon Street.

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Manufacturers of Mohair and Worsted Yarns. QUEENSBURY MILLS, Worcester, Mass. See Advt.

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Adjustable Curtain Rods and Sockets. FOWLER & CO., 65 Beacon Street, Worcester, Mass.

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Commercial Printing and Blank-book Work. O. B. WOOD, 50 Foster Street. See Advt.

RAILROADS.

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RAZORS.

Manufacturers of all styles, including Safety Razors. J. R. TORREY RAZOR CO., Chandler Street.

REEDS.

Organ Reeds and Reed Boards. HAMMOND REED CO., Worcester, Mass. See Advt.

RAZOR STROPS.

Manufacturers of all styles of Strops, also Stropping Machine. J. R. TORREY & CO., Chandler Street.

ROOMS WITH POWER.

Rooms with power in business district. ESTATE OF WM. T. MERRIFIELD, 100 Exchange St. See Advt.

SHOE MANUFACTURERS.

Heywood, the Worcester made Shoe. HEYWOOD BOOT & SHOE CO., Retail Store 415 Main Street. See Advt.

SLIPPERS.

Shoes and Slippers, Barefoot Sandals. Felt footwear a specialty. WORCESTER SLIPPER CO., J. P. Grosvenor, Prop., 370 Park Avenue.

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Worcester Pressed Steel Co., 100 Beacon Street. Light and heavy Stampings in all metals.

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Braman, Dow & Co., Contractors for Heating Apparatus. Steam, Water or Vapor. Mill Piping a specialty. 7 Washington Square.

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Leading Makes of steam and hot water heaters. CENTRAL SUPPLY CO., 35 Waldo Street. See Advt.

WORCESTER BUSINESS DIRECTORY—Continued.

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Largest and best variety, up-to-date in every respect. WARREN LEATHER GOODS CO.

TACKS AND NAILS.

Shoe Tacks, Hungarian Nails, Hob Nails. P. E. SOMERS, 17 Hermon Street, Worcester, Mass.

TAXIDERMIST.

Chas K. Reed, Naturalists' S pplies. 75 Thomas Street, corner Union, Worcester Mass.

VALENTINES.

Valentines, Holiday Goods, Easter Novelties. THE GEO. C. WHITNEY CO., 67 Union Street, Worcester.

WATER METERS.

The Best Known Meter. UNION WATER METER CO., Hermon Street. See Advt.

WIRE FLY KILLER.

Bigelow Wire Fly Killer. It kills but does not crush the fly. J. F. BIGELOW, 11 Foster Street.

WIRE GOODS.

Wire of all Kinds. SPENCER WIRE CO., Worcester and Spencer. See Advt.

Wire, wire cloth and poultry netting. WRIGHT WIRE CO., Worcester and Palmer. See Advt.

WOOL-SPINNING MACHINERY.

Johnson & Bassett, Wool-Spinning Machinery. 114 Foster Street, Worcester, Mass.

BANKS.

WORCESTER NATIONAL BANK, 9 Foster Street. Incorporated as a State Bank in 1804; as a National Bank in 1864. Capital $250,000; surplus and undivided profits $321,508.72. Dividends April and October; rate past year, 8 per cent. President, Stephen Salisbury; Vice President, James P. Hamilton, Cashier, Samuel D. Spurr; Directors, Stephen Salisbury, A. George Bullock, Charles A. Chase, James P. Hamilton, Lincoln N. Kinnicutt, Edward L. Davis, George F. Brooks, Paul B. Morgan, Reginald Washburn, Matthew J. Whittall.

WORCESTER TRUST COMPANY, 344 Main Street. Incorporated in 1868. Capital $500,000; surplus $500,000. Dividends January, April, July, and October; rate past year, 6 per cent. William D. Luey, President; Henry A. Marsh, Nathaniel Paine, Vice Presidents; Samuel H. Clary, Treasurer; Alvin J. Daniels, Secretary; Chairman of Board of Directors, Henry A. Marsh; Directors, Charles S. Barton, Geo. F. Blake, A. George Bullock, John H. Coes, Alexander DeWitt, Thomas B. Eaton, William Endicott, Jr., Henry F. Harris, Rockwood Hoar, C. Henry Hutchins, Lincoln N. Kinnicutt, Edwin T. Marble, J. Russel Marble, Neal Rantoul, Stephen Salisbury, Wm H. Sawyer, Frank Bulkeley Smith, E. D. Thayer, Chas. M. Thayer, Robert M. Washburn, George W. Wells, M. J. Whittall, G. Marston Whitin, Charles A. Williams, Robert Winsor.

PEOPLE'S SAVINGS BANK, 452 Main Street. Incorporated in 1864. Deposits $11,185,000; guaranty fund $520,000. Interest payable February and August 2d. Deposits go on interest February, May, August and November 1; rate past year, 3¾ per cent. President, Samuel R. Heywood; Treasurer, Charles M. Bent; Assistant Treasurer, Frederick W. White; Investment Committee, Samuel R. Heywood, William W. Johnson, Edwin T. Marble, Henry M. Harr s, Charles M. Thayer.

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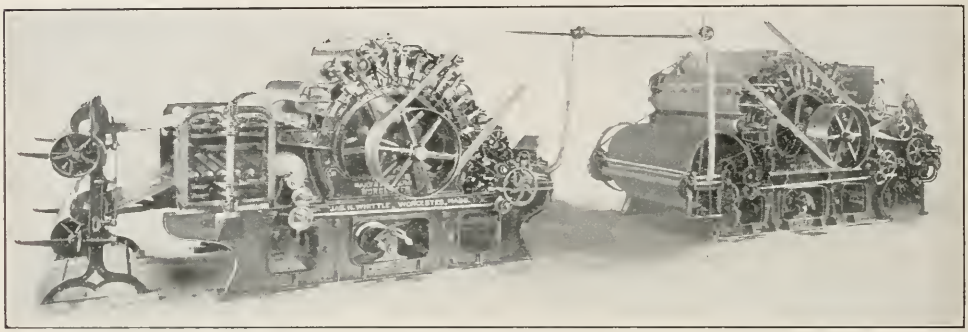

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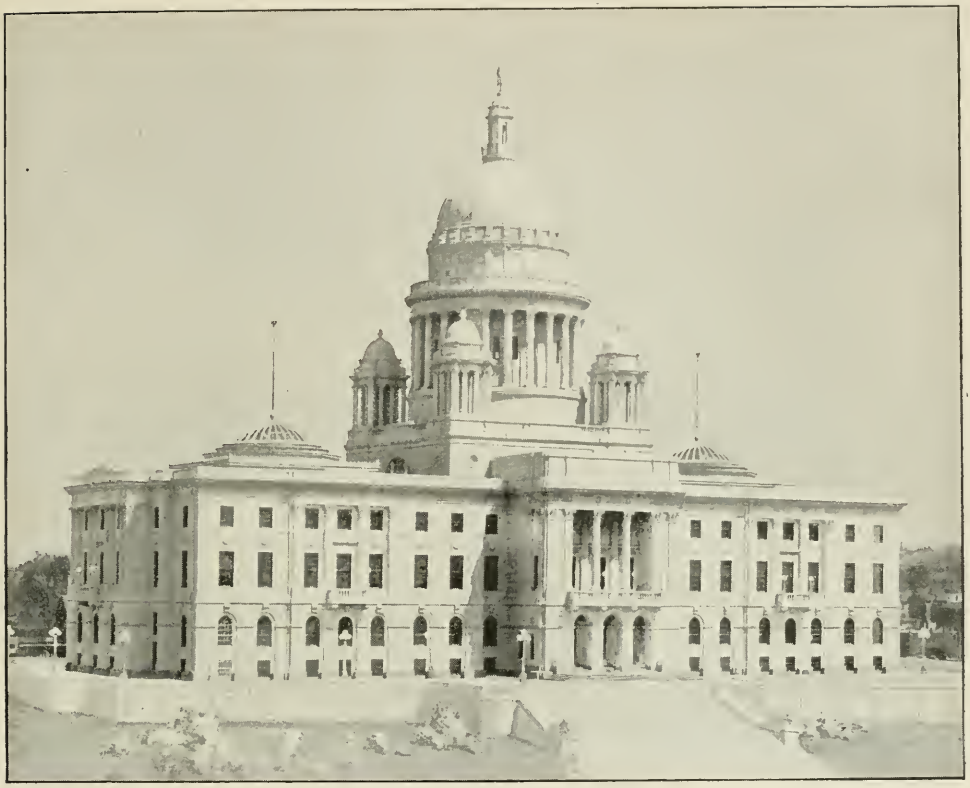

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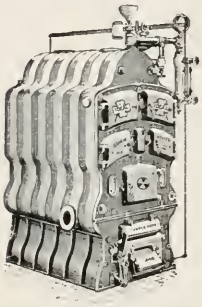

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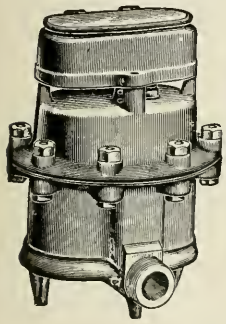

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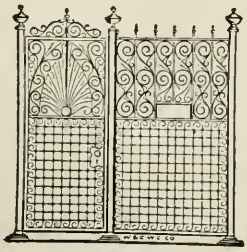

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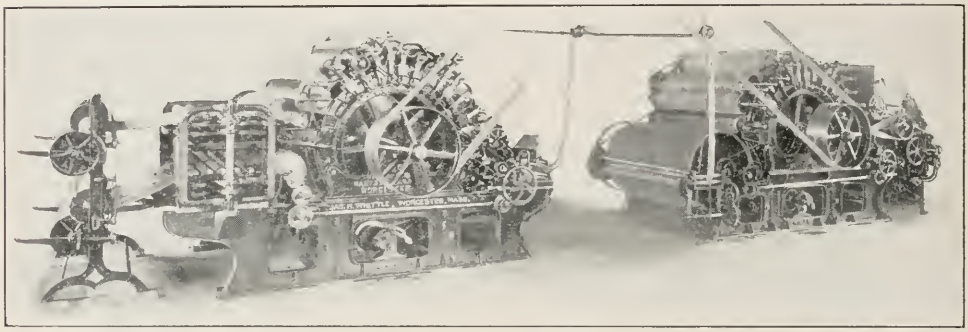

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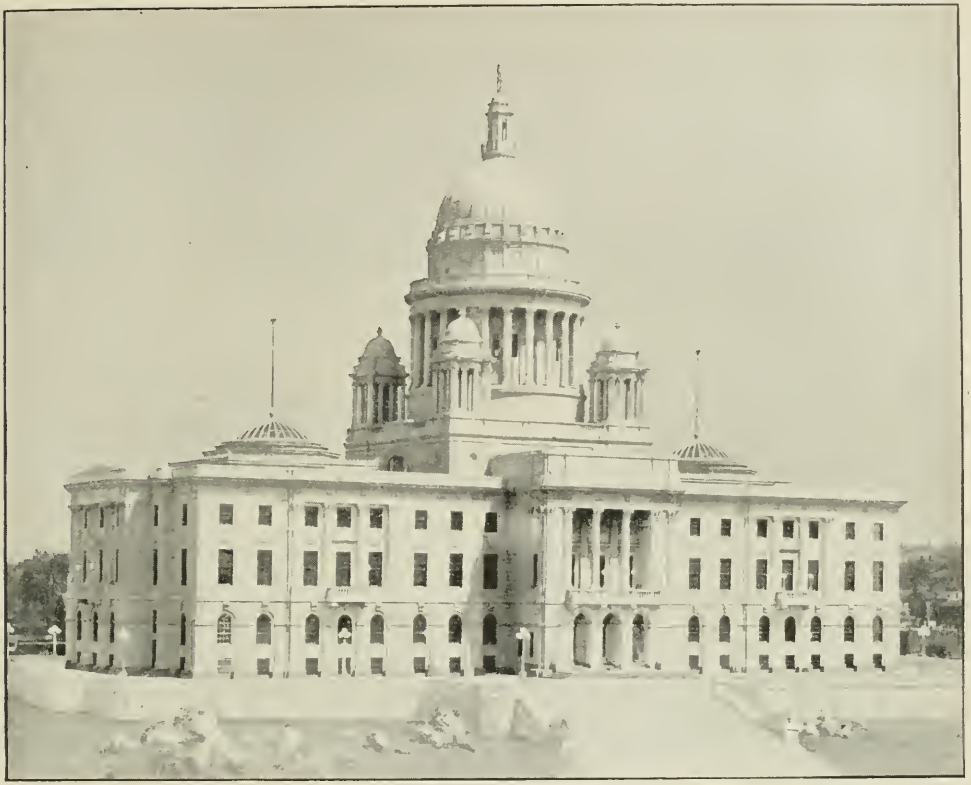

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